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Analysis of the Stages in the Growth
of Population in Canada.
1935.

- P R E F A C E -

The following study deals with the question of whether or not any order is discernible in the process of population growth in Canada. There is a frequent assumption that movements of population are in the main voluntary, i.e. that the motivating force is attraction from outside rather than propulsion from within. This assumption is evidently challenged if it appears that the rate and continuation of growth in numerous small areas is dependent upon local densities, i.e., that population does not move until such areas reach a density which they fail to exceed for a considerable period - assuming, of course, that general conditions remain unchanged. The present study is based on county areas, or where the latter are not available, on census divisions. Still smaller areas would improve the results, and it is proposed to examine these in a further study. The study was carried out under the direction of Mr. M.C. MacLean, M.A., F.S.S., Dominion Bureau of Statistics.

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Dominion Bureau of Statistics,
August 15, 1935.

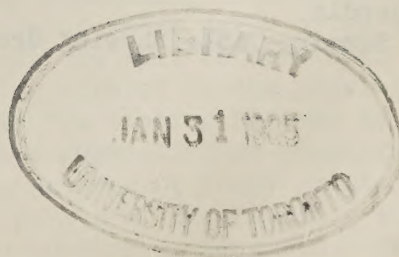


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ANALYSIS OF THE STAGES IN THE GROWTH OF POPULATION IN CANADA

INTRODUCTION

A description of the manner of growth of a population of a country including the changing rates of growth, the dates of greatest and least growth, and the regional aspects of growth, should be capable of indicating the causes of growth better than any theoretical or a priori considerations. This is especially true when the attending circumstances of the various aspects of growth are known. The following description of population growth in Canada was undertaken merely for the purpose of summarizing the most obvious facts revealed by the censuses and other material available on the numerical aspects of population from early times. It is not therefore a treatment undertaken for the purpose of formulating a theoretical law of population growth; though the conclusions from the bare description is that the manner of growth in Canada has been quite consistent with certain theories that have already been formulated. This is especially true if we consider a law in general terms without being under the necessity of expressing it mathematically. A succession of events may be the consequences of underlying principles or causes, and these causes may be ascertained or understood, but the succession cannot be expressed by a mathematical formula through the fact that the events do not follow in equal or otherwise related intervals of time. It is true that without this condition being fulfilled, predictions as to any definite points in the future are unsafe; but none the less, except as regards definite points, a fairly good indication of what will probably happen in the future is indicated by a series of repetitions in the past.

Now [the succession of events most prominent in the history of our population growth is a recurrence of short periods of very high rates of growth followed by longer periods of decreasing rates.] Since the later years of the 18th century, the rapid growth periods have been upon a progressively diminishing scale relatively but, of course, on a higher scale in absolute figures. With our present knowledge we can not say that rapid growth periods have recurred at equal intervals; however they were connected with certain important events in history; e.g., Frontenac's term of office, the American Revolution, the Irish famine and first building of railroads, and the opening of the West.

However it is also not certain that the aforementioned periods have not recurred at regular intervals. The uncertainty springs from two obvious sources. (1) We can not even hazard a guess as to the size of the aboriginal population in the whole area at the time of the earlier rapid growth periods. Consequently the rates of growth quoted were for whites only. If the Indian population in, say, 1781 and 1821 was 200,000 or more it is clear that the rates of increase were not, necessarily as great as, and that the highest rates did not necessarily coincide with, the dates mentioned. A stationary or slightly increasing or diminishing Indian population added to the small white population of those early dates would tend to throw the points of largest increase forward. (2) As will be developed more fully later on, there are obvious indications that an element of the population at the date of a census in a young country where widely fluctuating streams of immigration and emigration are being experienced is not a population as generally understood at all (this is especially true in large centres or focal points) but an aggregate of persons temporarily established at points of distribution who before the next census either spread throughout the country or emigrate. Their existence causes an unreal high point at that date which more properly belongs to a later date.

GENERAL DESCRIPTION OF THE GROWTH OF THE POPULATION OF CANADA

SINCE THE BEGINNING OF THE 17th CENTURY

[A description of the early growth of population in the area now known as Canada must necessarily deal separately with the white (including imported coloured) population on the one hand, and the aboriginal population on the other. One reason for this is the fact that we have a comparatively complete record of the white population from the beginning of the 17th century, thanks to the Jesuit missionaries and others during the period of early settlement] (made available since 1871 from the researches of M. Taché, first Director of the Census of the Dominion, and of the Census Branch of the Dominion Bureau of Statistics in 1931) whereas, on the other hand, the records of the aboriginal population are scattered and of varying reliability. Moreover, the two populations remained distinct until very recent times, so that any hypothetical law or order of progress would be of doubtful applicability in the case of the earlier periods. In the first instance, therefore, we trace the growth of the white population only, from the earliest records until the first Dominion census, that of 1871. Statement A presents these data for the area now known as Canada and continues them up to the present, as based on the seven censuses which have been taken since Confederation. For the period prior to the first Dominion Census, a slight element of estimation is involved in fitting the materials into 10 year intervals, but the figures are sufficiently accurate for any purpose to which they can be legitimately applied.

STATEMENT A .-- WHITE POPULATION OF CANADA, 1611 - 1931.

(a) (Mean population by decades of which years indicated are the mid-years.)

(a)	<u>Year</u>	<u>Whites</u>	<u>Year</u>	<u>Whites</u>	<u>Year</u>	<u>Whites</u>
	1611	17	1691	12,040	1771	105,000
	1621	79	1701	17,000	1781	150,000
	1631	101	1711	22,000	1791	233,000
	1641	360	1721	32,000	1801	362,000
	1651	680	1731	45,000	1811	517,000
	1661	2,400	1741	59,000	1821	750,000
	1671	7,100	1751	71,000	1831	1,085,000
	1681	10,300	1761	90,000	1841	1,654,000

(b) (Population for census years indicated)

1851 1/	2,300,000	1881	4,216,263	1911	7,101,151
1861 1/	3,090,000	1891 1/	4,715,000	1921	8,677,135
1871	3,580,524	1901	5,243,374	1931	10,253,875

STATEMENT B.- ABSOLUTE AND PER CENT INCREASES IN THE WHITE POPULATION OF CANADA

1681 - 1931.

Date	Absolute increase from date in intervals of -				Percent increase from date in intervals of -			
	10 years	20 years	30 years	40 years	10 years	20 years	30 years	40 years
1681	1,740	6,700	11,700	21,700	16.9	65.0	113.6	210.6
1691	5,000	10,000	20,000	33,000	41.1	82.7	165.7	273.7
1701	5,000	15,000	28,000	42,000	29.4	88.2	164.7	247.0
1711	10,000	23,000	37,000	49,000	45.4	104.5	168.1	222.7
1721	13,000	27,000	39,000	58,000	40.6	84.3	121.8	181.2
1731	14,000	26,000	45,000	60,000	31.1	57.7	100.0	133.3
1741	12,000	31,000	46,000	91,000	20.3	52.5	77.9	154.2
1751	19,000	34,000	79,000	162,000	26.7	47.8	111.2	228.1
1761	15,000	60,000	143,000	272,000	16.6	66.6	158.8	302.2
1771	45,000	128,000	257,000	412,000	42.8	121.9	244.7	392.3
1781	83,000	212,000	367,000	600,000	55.3	141.3	244.6	400.0
1791	129,000	284,000	517,000	852,000	55.3	121.8	221.8	365.6
1801	155,000	388,000	723,000	1,292,000	42.8	107.1	199.7	356.7
1811	233,000	568,000	1,137,000	1,783,000	45.0	109.8	219.9	344.8
1821	335,000	904,000	1,550,000	2,340,000	44.6	120.5	206.6	312.0
1831	569,000	1,215,000	2,005,000	2,496,000	52.4	111.9	184.7	230.0
1841	646,000	1,436,000	1,927,000	2,563,000	39.0	86.8	116.4	154.9
1851	790,000	1,281,000	1,917,000	2,415,000	34.3	55.6	83.3	105.0
1861	491,000	1,127,000	1,625,000	2,154,000	15.8	36.3	52.5	69.6
1871	636,000	1,135,000	1,663,000	3,521,000	17.7	31.6	46.4	98.3
1881	499,000	1,027,000	2,885,000	4,461,000	11.8	24.3	68.4	105.8
1891	528,000	2,386,000	3,962,000	5,539,000	11.2	50.6	84.0	117.4
1901	1,858,000	3,434,000	5,011,000	-	35.4	65.4	95.5	-
1911	1,576,000	3,152,700	-	-	22.1	44.3	-	-
1921	1,576,740	-	-	-	18.2	-	-	-

CHART I

WHITE POPULATION OF AREA NOW KNOWN AS CANADA 1611-1931

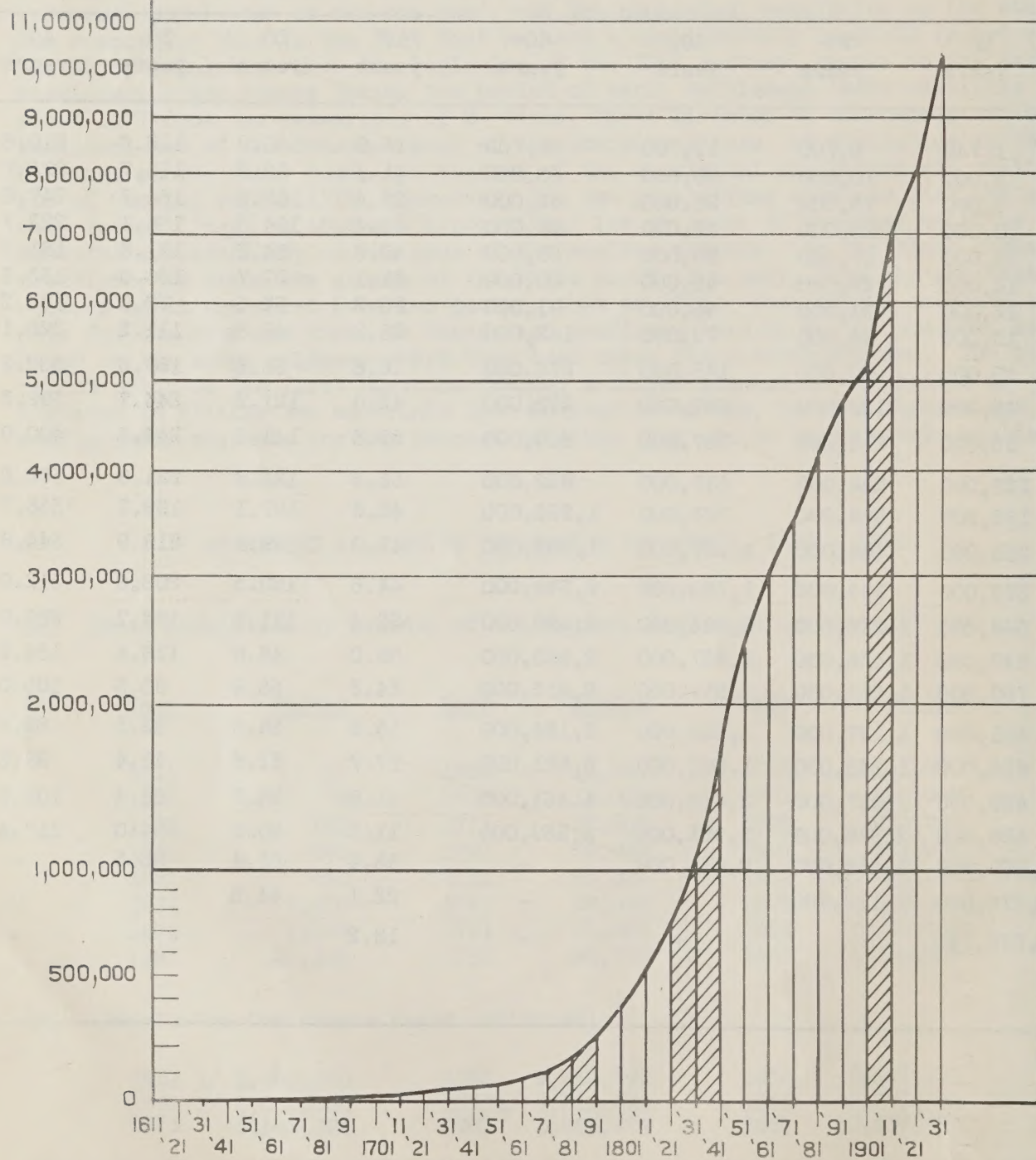


CHART 2

PERCENTAGE 20-YEAR AND 10-YEAR INCREASES IN THE WHITE POPULATION OF THE AREA NOW KNOWN AS CANADA, FROM EACH DECENNIUM SINCE 1681

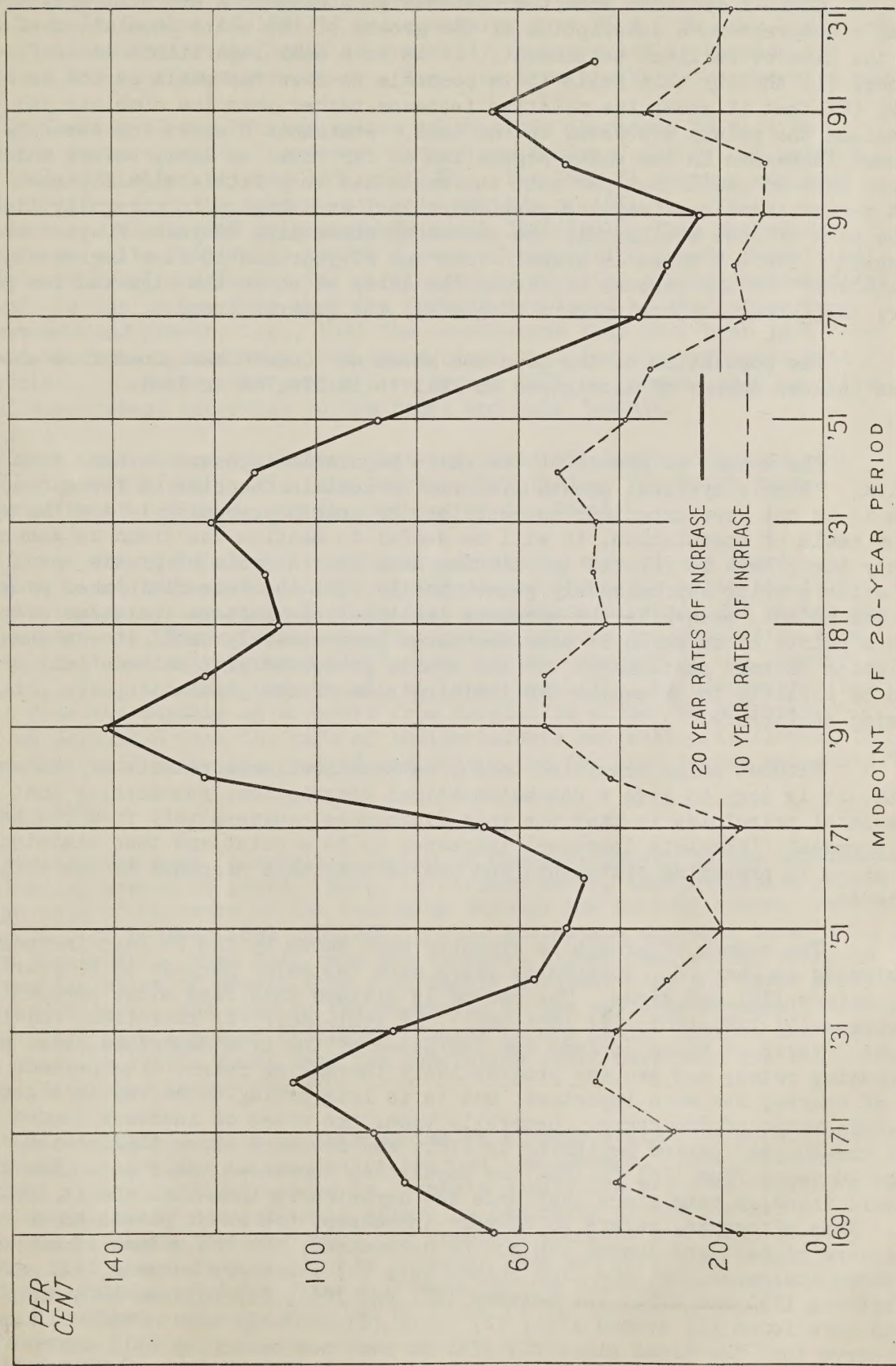


Chart I is based upon the contents of Statement A and will assist in giving a comprehensive description of the growth of the white population of Canada from the time of earliest settlement. It is on a semi-logarithmic scale for two reasons; (1) that by this scale it is possible to show the whole period in a single chart; (2) that it shows the relative increase rather than the absolute and thus emphasizes the points discussed in the text. Statement B shows the absolute and per cent increases in the white population as far back as 1681, before which the figures were so small that per cent increases had very little significance. Since short period increases (say ten-year increases) are subject to irregularities which may be more or less accidental, the statement shows also 20-year, 30-year and 40-year increases. Chart 2 shows in graphic form the 20-year and 10-year increases, the latter particularly for the purpose of fixing the dates at which the high and low points occur; the former as showing more adequately the general trend.

The population of the area now known as Canada has grown from about 17 whites and an unknown number of aborigines in 1611 to 10,376,786 in 1931.

The manner of growth of the white population appears to have been decidedly cyclical. Such a cyclical growth conforms to certain theories on the subject, and while it is not here expedient to describe the growth according to any theory still in the realm of speculation, it will be useful to mention the trend in general terms. Roughly the growth is related to existing density. A cycle of growth opens with the population growing approximately geometrically, but the rate diminished progressively from the outset. Meanwhile the absolute (arithmetic) increase increases progressively up to a point, after which it also decreases progressively until it vanishes and the population becomes stationary. If the course proceeded with mathematical precision it would be possible to determine the limiting size of the population, i.e., its size on becoming stationary.

Without being committed to any mathematical measurements of the above law of growth, it is easy to give a non-mathematical description, remembering that one of the fundamental principles is that the rate diminishes progressively from the beginning and the increment (absolute increase) increases up to a point and then diminishes. It has been shown in preceding statements and charts that this happened to the white population of Canada.

The manner of growth is probably best shown by the 20-year increases as illustrated in Chart 2. Apparently there were two major periods of 20-year increases, viz., before 1781 and since. The second is divided into five minor periods of 20-year increases: (1) 1781-1801; (2) 1801-1821; (3) 1821-1881; (4) 1881-1901; (5) 1901 to the present. Three of these periods saw increases of the type described, viz. progressively diminishing rates; and two saw progressively increasing rates. The periods from 1781 are, of course, the more important, but is is interesting to survey in a general way the whole range of 250 years. Generally then, the rates of increase tended upward until the 20-year period beginning in 1781; and downward since this period. Apparently in the 20 years from 1781 to 1801 the population increased 141.3 p.c. The general downward trend in rate since that date was arrested in 1821-1841 and in 1901 to 1921. This, of course, refers to 20-year increases; the exact points at which the rates were highest and lowest can not be determined, but the column of 10-year per cent increases indicates that the high points were (1) somewhere between 1711 and 1721; (2) between 1781 and 1791; (3) between 1831 and 1841; (4) between 1901 and 1911. Low points were found (1) around 1701; (2) 1761; (3) probably about 1896. It is important to observe that the trend since the 1781-91 peak has been generally downward, i.e., although rises have recurred they have never reached the height of this peak; further, each successive rise has been lower than its predecessor. Thus the main peak of

1781-91 was probably over 55.3 p.c. increase in ten years; the peak of 1831 was something over 52.4; that of 1901-11 was something over 35.4. We are justified, therefore, in considering the trend as generally downward and in terming the periods since the peak as minor periods, i.e., as mere breaks in a general trend.

[On looking at the 20-year column of absolute increases it will be observed that these absolute increases reached two maximum points; one between 1841 and 1861, the other between 1901 and 1921. The 1841-61 maximum occurred twenty years later than the twenty-year rate maximum of 1821-41. This absolute increase diminished progressively until 1881-1901. This method of growth conforms quite faithfully to the theory of population growth formulated by Verhulst and Pearl and Reid. The difficulty in applying precise mathematical measurements is due to the fact that the formula developed by the latter presupposes symmetrical growth; i.e., that the occurrences that have been just described come at certain intervals, and it is clear that the observed growth is not symmetrical. However, the period from around 1821 to (about) 1896 is quite capable of measurement according to the Pearl and Reid formula.]

[It is interesting to observe that the peaks of growth coincided with important points in history; viz. the American Revolution; the Irish famine and the building of railways, and the opening of the West.]

[It is probable that the rapid increase at the time of the American Revolution was not so much due to the coming of the Loyalists as to the fact that the closing up of one channel of British emigration directed the stream to Canada. In any case, during these rapidly growing periods the population came in at a rate that entirely ignored limitations to the capacity of the country at that time. That this was understood, at least partially, by contemporaries is evident from the wording of a report from Douglas in answer to Bathurst, 1827^x, "I am persuaded that the tide of indiscriminate emigration is flowing to our shores too rapidly for the good of the colony, or for that of the emigrants."

Period 1821-1896.

[Perhaps the most interesting period of Canada's growth is the 1821-96 period extending around 80 years. Here, as already noted, the population passed from a high rate of increase at the beginning through the various stages until it reached 11 p.c. between 1891 and 1901, a rate indicating approach to a stationary population. Even this rate was somewhat higher than normal owing to a slight restimulation of growth from a northerly movement into the newer parts of Quebec and Ontario, and also to the beginning of the westerly movement, which took place in a somewhat desultory fashion before 1901. Without these two movements there is little doubt that the population would have been all but stationary in another twenty years.]

The culmination point of this period as already stated was around 1856, when the absolute increase in population reached its maximum. Thus, between 1851 and 1861, the absolute increase in Canada's population was over 730,000 a figure not subsequently reached until after the beginning of the western movement. Thus between 1891 and 1901, the absolute increase was only 528,000, although the population from which this increase came was more than twice as great as that of 1851. Judging from such data dealing directly or indirectly with natural increase, as were supplied by Taché in the Census of 1891,

and from Statement R at the end of the chapter, the difference between these two absolute increases was due, not only to differential immigration and emigration, but also to differential rates of natural increase. Thus (the natural increase (per decade) in 1851, was over 22 p.c., while in 1891, it was probably around 12 p.c.) (see Statement R which gives 22.0 and 12.0 respectively). Between the beginning and the end of the period there was a slowing up of the two factors which make for growth, viz., natural increase and immigration, while there was a speeding up of emigration. The retardation of natural increase was a certain indication of an ageing population. Emigration and lack of immigration accelerated a process which would have brought the same results in the end, although they may have contributed to the slowing up of natural increase.)

Between this period and the next, (i.e., the present), there was an interval during which the population increased at an accelerating rate. High as the rate between 1901 and 1911, (viz., 35 p.c.), appears, it gives only a slight indication of the manner in which the population grew in this period. The yearly figures of immigration, since they cover only a short period of a continuous inward movement, may be regarded as furnishing a reliable source of information on this point. In 1901 and 1902 the inflow was comparatively small (between fifty and seventy thousand) increasing from year to year, until in 1913, the number of immigrants was 402,432, a figure almost equal to the total increase in population in the ten years between 1891 and 1901. While these immigrants did not necessarily remain in Canada permanently, the fact remains that they augmented the population of that year, and, added to the natural increase, formed an addition in one year as great as that which took place in each of the decades 1881-91 and 1891-1901.

It is noteworthy that, when this period of abnormal increase passed, growth was resumed at a level which was much lower than that which initiated the previous period. The question propounds itself whether our present period may not indicate a rejuvenation, as it were, rather than an entirely new era of growth. Otherwise expressed, is it possible that the growth since 1781 up to the present exhibits any determinate continuity? This aspect will be further elucidated in connection with a description of the growth of Canada by individual areas.

KEY TO INDEX MAP

Province	County	Number on Map	Province	County	Number on Map	Province	County	Number on Map
Prince Edward Island	Kings	1	Quebec - Con.	Compton	16	Ontario	Addington	1
	Prince	2		Deux-Montagnes	17		Algoma	2
	Queens	3		Dorchester	18		Brant	3
Nova Scotia	Annapolis	1		Drummond	19		Bruce	4
	Antigonish	2		Frontenac	20		Carleton	5
	Cape Breton	3		Gaspé	21		Cochrane	6
	Colchester	4		Hochelaga	22		Dufferin	7
	Cumberland	5		Hull	23		Dundas	8
	Digby	6		Huntingdon	24		Durham	9
	Guysborough	7		Iberville	25		Elgin	10
	Halifax	8		Joliette	26		Essex	11
	Hants	9		Kamouraska	27		Frontenac	12
	Inverness	10		Labelle	28		Glengarry	13
	Kings	11		Lac-St-Jean	29		Grenville	14
	Lunenburg	12		Laprairie	30		Grey	15
	Pictou	13		L'Assomption	31		Haldimand	16
	Queens	14		Laval	32		Haliburton	17
	Richmond	15		Levis	33		Halton	18
	Shelburne	16		L'Islet	34		Hastings	19
	Victoria	17		Lotbiniere	35		Huron	20
	Yarmouth	18		Maskinonge	36		Kenora	21
New Brunswick	Albert	1		Matane	37		Kent	22
	Carleton	2		Mégantic	38		Lambton	23
	Charlotte	3		Missisquoi	39		Manark	24
	Gloucester	4		Montcalm	40		Leeds	25
	Kent	5		Montmagny	41		Lennox	26
	Kings	6		Montmorency	42		Lincoln	27
	Madawaska	7		Montreal Island	43		Manitoulin	28
	Northumberland	8		Jesus Island	44		Middlesex	29
	Queens	9		Napierville	45		Muskoka	30
	Restigouche	10		Nicolet	46		Nipissing	31
	St. John	11		Papineau	47		Norfolk	32
	Sunbury	12		Pontiac	48		Northumberland	33
	Victoria	13		Portneuf	49		Ontario	34
	Westmorland	14		Quebec	50		Oxford	35
	York	15		Richelieu	51		Parry Sound	36
Quebec	Abitibi	1		Richmond	52		Peel	37
	Argenteuil	2		Rimouski	53		Perth	38
	Arthabaska	3		Rouville	54		Peterborough	39
	Bagot	4		Saguenay	55		Prescott	40
	Beauce	5		Shefford	56		Prince Edward	41
	Beauharnois	6		Sherbrooke	57		Rainy River	42
	Bellechasse	7		Soulanges	58		Renfrew	43
	Berthier	8		Stanstead	59		Russell	44
	Bonaventure	9		St-Hyacinthe	60		Simcoe	45
	Brome	10		St-Jean	61		Stormont	46
	Chambly	11		St-Maurice	62		Sudbury	47
	Champlain	12		Témiscouata	63		Thunder Bay	48
	Charlevoix	13		Temiskaming	64		Timiskaming	49
	Chateauguay	14		Terrebonne	65		Victoria	50
	Chicoutimi	15		Vaudreuil	66		Waterloo	51
				Verchères	67		Welland	52
				Wolfe	68		Wellington	53
				Yamaska	69		Wentworth	54
							York	55
							District of Patricia	56

NOTE: The Census Division numbers of the Prairie Provinces and British Columbia are given on the map.

SHOWING

as organized at the census of 1931
with information as to population of each area and those years
when maximum density was reached if previous to
1931

[illegible]

Location of centre of population of Canada and provinces from 1851 to 1931 in number of miles north of 42° Lat. and west of 60° Long.^x

C A N A D A

Years	Exact location in degrees		Number of Miles		Movement Between Censuses (Miles)	
	N. Lat.	W. Long.	N. of 42°	W. of 60°	N.	W.
1851	45.35	74.17	231	692	-	-
1861	45.25	74.33	224	700	-7	8
1871	45.23	74.53	223	710	-1	10
1881	45.28	74.94	226	730	3	20
1891	45.45	76.05	238	784	12	54
1901	45.74	77.31	258	845	20	61
1911	46.57	81.90	315	1,042	57	197
1921	46.84	83.49	334	1,113	19	71
1931	46.96	84.17	342	1,143	8	30

P R I N C E E D W A R D I S L A N D

1851	46.33	63.26	296	154	-	-
1861	46.33	63.28	296	155	-	1
1871	46.33	63.30	296	156	-	1
1881	46.33	63.32	296	157	-	1
1891	46.33	63.32	296	157	-	-
1901	46.33	63.34	296	158	-	1
1911	46.33	63.36	296	158	-	-
1921	46.33	63.38	296	159	-	1
1931	46.33	63.38	296	159	-	-

N O V A S C O T I A

1851	45.10	63.30	214	163	-	-
1861	45.10	63.32	214	164	-	1
1871	45.10	63.32	214	164	-	-
1881	45.09	63.34	213	165	1	1
1891	45.10	63.32	214	164	1	- 1
1901	45.11	63.28	215	162	1	- 2
1911	45.13	63.14	217	155	2	- 7
1921	45.14	63.08	218	152	1	- 3
1931	45.14	63.04	218	150	-	- 2

^x The centres of population thus located are centres of gravity, i.e., the moment of population and distances. The unit of moment was the population of a county multiplied by the distance of its population centre from the fixed point (the centre of 1851). In fixing this point distances were calculated in degrees from 42° N. Lat. 60° W. Long.

Location of centre of population of Canada and provinces from 1851 to
1931 in number of miles north of 42° Lat. and west of 60° Long. - Cont'd.

NEW BRUNSWICK

Years	Exact location in degrees		Number of Miles		Movement Between Censuses (Miles)	
	N. Lat.	W. Long.	N. of 42°	W. of 60°	N.	W.
1851	46.01	66.03	277	289	-	-
1861	46.02	66.03	278	289	1	-
1871	46.02	66.05	278	290	-	1
1881	46.08	66.03	284	289	6	-1
1891	46.12	66.01	288	288	4	-1
1901	46.14	66.01	290	288	2	-
1911	46.19	66.03	295	289	5	1
1921	46.21	66.03	297	289	2	-
1931	46.24	66.05	300	290	3	1

QUEBEC

1851	46.21	72.46	290	593	-	-
1861	46.23	72.42	292	591	2	- 2
1871	46.26	72.38	295	589	3	- 2
1881	46.28	72.36	297	588	2	- 1
1891	46.26	72.32	295	586	-2	- 2
1901	46.27	72.48	296	593	1	7
1911	46.26	72.50	295	594	-1	1
1921	46.28	72.56	297	597	2	3
1931	46.29	72.72	298	605	1	8

ONTARIO

1851	43.99	78.93	139	941	-	-
1861	43.98	79.15	138	952	-1	11
1871	43.97	79.31	137	960	-1	8
1881	43.99	79.41	139	965	2	5
1891	44.02	79.39	142	964	3	-1
1901	44.08	79.39	148	964	6	-
1911	44.18	79.49	158	969	10	5
1921	44.17	79.57	157	973	-1	4
1931	44.18	79.67	158	978	1	5

Location of centre of population of Canada and provinces from 1851 to
1931 in number of miles north of 42° Lat. and west of 60° Long. - Cont'd.

M A N I T O B A

Years	Exact location in degrees		Number of Miles		Movement Between Censuses (Miles)	
	N. Lat.	W. Long.	N. of 42°	W. of 60°	N.	W.
1851	-	-	-	-	-	-
1861	-	-	-	-	-	-
1871	49.99	98.05	551	1,697	-	-
1881	49.72	97.59	533	1,688	-18	- 9
1891	49.74	98.17	534	1,714	1	26
1901	49.83	98.33	540	1,717	6	3
1911	49.86	98.14	542	1,705	2	-12
1921	49.91	97.99	546	1,698	4	-17
1931	49.90	97.90	545	1,694	- 1	- 4

S A S K A T C H E W A N

1901	51.13	104.02	630	1,915	-	-
1911	51.00	105.11	621	1,967	- 9	52
1921	51.07	105.49	626	1,979	5	12
1931	51.17	105.51	633	1,975	7	- 4

A L B E R T A

1901	52.13	112.84	699	2,251	-	-
1911	51.90	112.68	683	2,255	-16	4
1921	52.12	112.82	698	2,250	15	- 5
1931	52.33	113.04	713	2,249	15	- 1

B R I T I S H C O L U M B I A

1851	-	-	-	-	-	-
1861	-	-	-	-	-	-
1871	-	-	-	-	-	-
1881	51.23	123.76	637	2,767	-	-
1891	50.22	123.13	567	2,803	-70	36
1901	50.36	122.35	577	2,756	10	-47
1911	50.39	122.42	579	2,759	2	3
1921	50.46	122.77	584	2,768	5	9
1931	50.51	122.70	587	2,765	3	- 3

THE MOVEMENT AND SPREAD OF POPULATION (INCLUDING ABORIGINES) IN CANADA

INTRODUCTORY.- The movement and spread of the population of Canada can be measured fairly adequately by studying the behaviour of small units like counties, and later, the behaviour of cities as well. These represent areas which are identical throughout the period of study as units of settlement. The questions to be answered are: Did the population first fill these units and then spread in an orderly manner to adjacent areas? Was any cohesion retained in the movement and spread of population? Was there an orderly sequence in the outward spread or in the varying degrees of density at which these areas arrived, or were the settlements originally widely scattered spasmodic, or tentative, with or without possibilities of a later inward spread? What relationship, if any, is traceable between the growth of individual counties and that of Canada as a whole? Was the growth of Canada governed by conditions within the counties or, on the contrary, were the conditions within the counties governed by general conditions, such as economic periods, the state of world affairs, and so on? Clearly these are important questions and should be capable of solution. If the growth of Canada was conditioned mainly and more or less fortuitously by external conditions we have nothing to measure by, but if it can be traced to internal conditions as indicated by a systematic spread or to conditions indicating that the growth has been a stage in world development, predictions as to its future are possible.

In studying the movement and spread of population in Canada thus minutely, it will be necessary to begin as late as 1851 because earlier data are not available by counties. The year 1851 is a landmark in many respects. As pointed out earlier, it is very near the middle of an 80-year period during which the population of Canada grew in fairly close accordance with the law formulated by Verhulst and Pearl and Reid. It is the culmination of a period of heavy immigration and, apparently, of rates of natural increase which would be astounding at the present day. The decade following showed, undoubtedly, the greatest absolute increase in population in the history of Canada up to 1901-11, but the rate of increase was less than in previous decades. According to the Pearl and Reid Theory, it was the point of inflection in a cycle of growth, i.e., the point at which the absolute increase is greatest, increasing up to, and decreasing after this point. In many ways it formed a parallel to the decade 1911-21, or rather what 1911-21 would probably have been without the Great War. It will be useful, therefore, to describe as minutely as possible, the situation as regards population settlement in the year 1851.

POPULATION DENSITY AND CLASSES. - Perhaps the best method of describing the situation in 1851, is to state the location of the population and the extent to which the counties were populated. The unit of measurement employed was the number of persons per square mile of land area which will be referred to from time to time as "population density". To make the picture clearer, these densities will be arranged into 15 classes, viz., under 1 per square mile, 1 and under 5, 5 and under 10 and, by class intervals of 10, to 120 and over. Statement C below shows the number of counties in each class of density from 1851 to 1931 and appended to this statement is a scale of reference showing the counties of Canada and states of the United States, which, at the present day, come within each class.

STATEMENT C.- COUNTIES OF EASTERN CANADA ACCORDING TO CLASS DENSITY.

Number of Counties

Class	Population per square mile	1851	1861	1871	1881	1891	1901	1911	1921	1931
1.	Under 1	6	8	9	9	9	10	7	6	3
2.	1 and under 5	16	11	13	8	10	9	11	11	12
3.	5 " " 10	23	19	11	14	15	16	17	17	17
4.	10 " " 20	36	30	25	26	25	25	23	21	26
5.	20 " " 30	13	23	30	23	21	22	21	25	21
6.	30 " " 40	13	8	12	11	11	12	18	16	15
7.	40 " " 50	9	12	10	13	17	20	20	19	23
8.	50 " " 60	5	8	16	18	14	18	12	14	8
9.	60 " " 70	6	8	9	11	14	5	10	8	10
10.	70 " " 80	5	7	7	7	5	4	2	2	3
11.	80 " " 90	4	6	2	4	4	4	2	4	1
12.	90 " " 100	4	2	2	2	4	4	3	1	4
13.	100 " " 110	1	1	2	3	1	2	4	-	1
14.	110 " " 120	-	3	-	-	1	1	-	-	-
15.	120 and over	1	1	3	3	3	4	8	14	14
Total		142	147	151	152	154	156	158	158	158
Mean Class of density		5.14	5.70	5.67	5.97	5.95	5.89	6.08	6.25	6.35

Scale of Reference: The provinces of British North America and the states of the United States of America coming under each class of density at the latest census.

1.	Under 1	Yukon, N.W.T., Labrador, Arctic Islands, Alaska, Nevada.
2.	1 and under 5	Quebec, Manitoba, British Columbia, Newfoundland, Saskatchewan, Alberta, Montana, Wyoming, New Mexico, Arizona, (the whole of Canada) (the Mountain States).
3.	5 " " 10	Ontario, South Dakota, Idaho, Utah.
4.	10 " " 20	New Brunswick, North Dakota, Nebraska, Colorado, Oregon.
5.	20 " " 30	Nova Scotia, Maine, Kansas, Florida, Texas, Washington State (the West North Central States, the Pacific States, the West South Central States).
6.	30 " " 40	Vermont, Minnesota, Arkansas, Oklahoma, California.
7.	40 " " 50	Prince Edward Island, New Hampshire, Iowa, Georgia, Mississippi, Louisiana, (the whole United States) (the World).
8.	50 " " 60	Missouri, Virginia, North Carolina, South Carolina, Alabama, Wisconsin, Hawaii, (the east south central States and the south Atlantic States).
9.	60 " " 70	Kentucky, Tennessee.
10.	70 " " 80	West Virginia.
11.	80 " " 90	Indiana, Michigan.
12.	90 " " 100	Delaware.
13.	100 " " 110	(The East North Central States).
14.	110 " " 120	(The New England States)
15.	120 and over	The remainder of the United States (10 States and Porto Rico).

In 1851, the inhabited parts of Canada consisted of 142 counties which have since increased to 219, but the eastern provinces, with which we are almost entirely concerned in 1851, have increased since that date only by 16 counties, some of which have been added by actual acquisition of new territory. Out of the 142 counties, 35 had a density of more than 40 per square mile, or greater than the present day Prince Edward Island or New Hampshire; 26 had between 20 and 40 or a greater density than that of the present Nova Scotia or Maine; 36 had from 10 to 20, or greater than the present New Brunswick or North Dakota; 23 had between 5 and 10, or greater than present Ontario or Utah; 16 had from 1 to 5, or greater than present Manitoba, while only 6 had a smaller density than present day Nevada.

The centre of the population of Canada was in the county of Soulanges, Quebec or 15 miles south west of Montreal. The concentration of this centre can best be described by giving the location of the most thickly settled parts, i.e., counties with more than 40 per square mile. Of these 35 counties, 1 was in Prince Edward Island, 1 in New Brunswick, 20 in Quebec and 13 in Ontario. The centre of the Quebec counties was 59 miles north and 99 miles east of the Canadian centre, or in the county of Nicolet about half-way between Montreal and Quebec; the centre of the Ontario counties was 92 miles south and 249 miles west of the Canadian centre or in the county of Ontario about 25 miles north east of Toronto; the centre of the combined Quebec and Ontario counties was 43 miles south and 110 miles west of the Canadian centre or in the county of Frontenac, Ontario, i.e., about 25 miles north west of Kingston. This confines the weight of the population to the banks of the St. Lawrence and the border of Lakes Ontario and Erie and the southern parts of Lake Huron. There was a remarkably even gradation of densities from these points outward and, as mentioned, there was only a small number of very thinly settled parts. In fact the population of 1851 was more normally spread as between counties than it has been since that date, the growth of thickly settled counties in Prince Edward Island and the other Maritimes somewhat disturbing this even distribution. The change up till 1881 will be seen in the following summary taken from the preceding statement:

Number of counties with:	<u>1851</u>	<u>1861</u>	<u>1871</u>	<u>1881</u>
Less than 1 per square mile	6	8	9	9
1 - 40 per square mile	101	91	91	82
40 and over	35	48	51	61
TOTAL	142	147	151	152

It is obvious that the growth from 1851 to 1881 was from densities which are below the present density of Vermont to densities which exceed the present density of the World or Prince Edward Island, while only 3 were added to counties of lower density than that of the whole of Canada today, i.e., the population did not colonize new areas but rather settled in those already well inhabited.

The population in 1851 of the area now known as Eastern Canada was 2,375,597 including an immigrant population of about 460,000 or about 19 p.c. of total. The present population of Eastern Canada is 7,315,041, of whom 477,431 are in counties which had no recorded inhabitants in 1851 with 6,837,610 in the

areas represented in 1851. The present immigrant population (in 1931) of Eastern Canada is 1,125,013, or about 15 p.c. of the total Eastern Canada population, a little less than the proportion in 1851. This is rather striking. Eastern Canada, as regards absorption, is in almost the same position as it was in 1851, the same process of heavy immigration leading up to this position. It is interesting to note that emigration from Canada to the United States had already begun. The United States census of 1850 recorded 147,711 Canadian born in the United States population.

THE DECADE 1851 - 61.

Growth.— The population in this decade increased from 2,436,297 to 3,229,633 or 32.6 per cent, a rate of increase which has not since been equalled except in 1901 - 11. The absolute increase in this decade was the greatest in the history of Canada up till 1901 - 11. The increase, as the statement which has just been given shows, did not move out to new areas, but rather increased the densities of the old. The centre of population moved 7 miles south and 8 miles west, remaining in Soulanges, Que.; the southward movement being due, not only to the heavy increase in Ontario but also to a falling off in growth in Quebec. The counties which received the greatest proportional addition to their population was counties comparable in density to the present Nova Scotia and Maine. It is remarkable that the immigrant population in this decade increased by about 200,000, almost a fourth of the total increase, a proportion since exceeded only in the decade 1901 - 11 when the immigrant increase formed 48.4 p.c. of the total increase. The immigrant population of 1861 increased to 682,000 or to about 21 p.c. of the total population, the approximate proportion in 1931, but the immigrant increase in 1921 - 31 was only 4.0 p.c. of the total population of 1921, while in 1851-61 it was about 9 p.c. of the total population of 1851. In 1901 - 11 it was over 16 p.c. of the population of 1901. The decade of 1851 - 61 seemed to be the last of a series of decades of heavy immigration, as it is evident from data on arrivals that the increases in previous decades were much heavier in proportion to the population than in 1851 - 61. If we consider the increase in native population separately, it will be seen that in 1851-61 it was 23 p.c. of the total population of 1851, while in 1901-11, the subsequent decade of greatest increase, it increased only about 18 p.c. Clearly, then, the decade 1851-61 was one of great internal increase.

Direction of Movement and Stage of Settlement. In view of the foregoing it will be interesting to note that, even in this period of heavy increase 4 counties showed actual decreases, viz., Laprairie, St-Hyacinthe, St-Jean, and Deux-Montagnes, and that 24 others showed increases of less than 14 p.c. which meant an undoubted loss of a part of their natural increase in this decade.^{1/} Of these, 17 were in Quebec, 5 in the Maritime Provinces and 2 in Ontario, while the 4 showing absolute decreases were all in Quebec. This shows that even at that period there had begun an exodus, but probably largely to other parts of the province or to other provinces in Canada. Of 63 counties which apparently lost at least a part of their native increase in 1851-61 the counties with a population density of more than 40 to the square mile had 24 out of a total of 35 while those with less than 40 per square mile had 43 out of a total of 107, or 68.6 and 40.2 p.c. respectively.

^{1/} A minimum of 14 p.c. increase as an indication of no loss of native increase is used uniformly in examining each decade since 1851. The reason for using 14 p.c. is that this seems to be the safest estimate of the point of native increase up to the present.

STATEMENT D. - NUMBER OF COUNTIES OF CANADA GAINING LESS THAN 24 PER CENT^{2/}
IN 1851-61, BY DENSITY CLASS IN 1851 AS COMPARED WITH THE DENSITY
OF ALL COUNTIES.

(1) Density Class	(2) All Counties	(3) Counties gaining less than 24 p.c.	(3) as p.c. of (2)
Under 1	6	-	0
1 and under 5	16	5	31.3
5 " " 10	23	8	34.8
10 " " 20	36	18	50.0
20 " " 30	13	8	61.5
30 " " 40	13	4	30.8
40 " " 50	9	6	66.7
50 " " 60	5	1	20.0
60 " " 70	6	5	83.3
70 " " 80	5	5	100.0
80 " " 90	4	3	75.0
90 " " 100	4	3	75.0
100 " " 110	1	1	100.0
110 " " 120	-	-	-
120 and over	1	-	0
Total	142	67	47.2
Under 40	107	43	40.2
Over 40	35	24	68.6

2/ i.e. apparently losing population in the decade.

It is clear that the counties which began to lose population tended to be the thickly settled counties. On the other hand, out of 67 counties which gained 27 per cent or more, (which seems to be a safe upper limit to the rate of natural increase in the decade) 46 had in 1851, a density of less than 20 per square mile, while only 9 had a density of more than 40 per square mile. The population seemed to move from counties which had a density greater than that of Prince Edward Island or New Hampshire of today to counties which had a density of less than that of Nova Scotia or Maine of today. Of the counties thus gaining more than the 27 per cent, 15 were in the Maritime Provinces, 25 were in Quebec and 27 in Ontario. Clearly also, the province in which the exodus started was Quebec, the movement apparently being largely in the direction of thinly settled parts of Quebec, none of the eastern parts of Ontario being represented among the large increases. The fact that the exodus was from the thickly settled parts would seem to be very significant. At first sight it would seem obvious that the most thickly settled parts, having larger numbers at the ages at which people are apt to move, would show the first exodus, but if the movement were merely individualistic and not due to a fundamental cause, this would not follow, for there would be some persons at these ages in all counties, and in the slowly increasing counties greater proportions

1/ (Cont'd) N.B. "Native increase" throughout this study is used in its literal sense and must not be confounded with the technical term "natural increase". "Native increase" is the increase in Canadian born.

at early adult ages. The fact of the first exodus taking place in the more thickly settled parts, where facilities for social contact were greatest, is however, understandable on the assumption that these densely populated areas offered no further room for expansion; that the movement was not in quest of a higher standard of living but to avoid a lower. It is particularly suggestive that the exodus began in Quebec where both opportunities and perhaps psychology would make the social tie stronger than elsewhere. The counties showing the first actual decreases were St-Hyacinthe, Laprairie, St-Jean and Deux-Montagnes, all thickly settled, varying from 66 to 90 persons per square mile - and where the division of the farms afforded practically the same social facilities as in towns. It was clearly impossible to maintain a subdivision of land indefinitely that would enable an increasing population to live at the same level as their fathers. In the decade under consideration, the Canadian born population of the United States increased by 102,259, i.e. between 3 and 4 p.c. of the mean population of 1851-61.

Since the location of the counties which in 1851-61 undoubtedly lost population, in a period of heavy internal increase, seems to be very important, they are given individually in Statement E. below.

STATEMENT E. -- COUNTIES IN EASTERN CANADA WHICH INCREASED LESS THAN
14 P.C. OR DECREASED IN 1851 - 61.

Number on Map	County		P.C. Increase 1851-61	Density 1851	Population		
					1851	1861	Increase
2.	Antigonish,	N.S.	10.4	25	13,467	14,871	1,404
3.	Cape Breton,	"	10.9	19	18,822	20,866	2,044
13.	Pictou,	"	12.5	23	25,587	28,785	3,198
16.	Shelburne,	"	0.4	11	10,622	10,668	46
17.	Victoria,	"	10.9	.8	8,698	9,643	945
2.	Argenteuil,	Que.	4.2	16	12,351	12,897	546
7.	Bellechasse,	"	7.5	23	14,947	16,062	1,115
11.	Chambly,	"	2.3	93	12,835	13,132	297
14.	Chateauguay,	"	3.8	65	17,192	17,837	645
17.	Deux-Montagnes,	"	-1.0	66	18,352	18,164	-188
25.	Iberville,	"	13.7	75	14,861	16,891	2,030
27.	Kamouraska,	"	8.7	19	19,375	21,058	1,683
30.	Laprairie,	"	-4.9	90	15,216	14,475	-741
31.	L'Assomption,	"	2.9	68	16,866	17,355	489
36.	Maskinongé,	"	12.8	.6	13,115	14,790	1,675
41.	Montmagny,	"	12.7	19	11,883	13,386	1,503
44.	Jesus Island,	"	4.0	109	10,103	10,507	404
45.	Napierville,	"	7.2	91	13,541	14,513	972
46.	Nicolet,	"	8.3	32	20,218	21,902	1,684
51.	Richelieu,	"	7.5	80	17,737	19,070	1,333
54.	Rouville,	"	1.6	74	17,935	18,227	292
58.	Soulanges,	"	6.2	85	11,512	12,221	709
60.	St-Hyacinthe,	"	-0.6	68	18,994	18,877	-117
61.	St-Jean,	"	-2.5	74	15,226	14,853	-373
67.	Verchères,	"	7.1	73	14,465	15,485	1,020
69.	Yamaska,	"	12.1	46	16,932	18,987	2,055
37.	Peel,	Ont.	9.8	53	24,816	27,240	2,424
41.	Prince Edward	"	10.5	48	18,887	20,869	1,982
Total.			6.5		444,555	473,631	29,076

STATEMENT E. - COUNTIES IN EASTERN CANADA WHICH INCREASED LESS THAN
14 P.C. OR DECREASED IN 1851-61. - Concluded.

Number on Map	County	P.C. Increase 1851-61	Density 1851	Population		Increase
				1851	1861	
All Eastern Canada		33.5		2,375,597	3,171,418	795,821
Remainder of Eastern Canada		39.7		1,931,042	2,697,787	766,745
The West and North		-4.1		60,700	58,215	-2,485
All Canada		32.6		2,436,297	3,229,633	793,336

STATEMENT F. - COUNTIES GAINING LESS THAN 24 P.C. I.E. APPARENTLY
LOSING PART OF THEIR NATIVE INCREASE, 1851-61.

Number on Map	County		P.C. Increase 1851-61	Density 1851	Population		Increase
					1851	1861	
3.	Queens,	P.E.I.	23.09	42.0	32,111	39,525	7,414
1.	Annapolis,	N.S.	17.27	11.1	14,286	16,753	2,467
2.	Antigonish,	"	10.43	24.9	13,467	14,871	1,404
3.	Cape Breton,	"	10.86	19.4	18,822	20,866	2,044
6.	Digby,	"	20.40	12.6	12,252	14,751	2,499
7.	Guysborough,	"	17.28	6.7	10,840	12,713	1,873
8.	Halifax,	"	22.82	19.4	39,914	49,021	9,107
9.	Hants,	"	21.84	11.7	14,330	17,460	3,130
10.	Inverness,	"	18.03	12.0	16,917	19,967	3,050
12.	Lunenburg,	"	19.74	14.0	16,395	19,632	3,237
13.	Pictou,	"	12.50	22.8	25,587	28,785	3,198
15.	Richmond,	"	21.45	21.2	10,380	12,607	2,227
16.	Shelburne,	"	0.43	10.9	10,622	10,668	46
17.	Victoria,	"	10.86	7.9	8,698	9,643	945
18.	Yarmouth,	"	17.53	15.7	13,142	15,446	2,304
3.	Charlotte,	N.B.	18.68	15.9	19,938	23,663	3,725
6.	Kings,	"	23.57	13.6	18,842	23,283	4,441
10.	Restigouche,	"	17.14	1.3	4,161	4,874	713
12.	Sunbury,	"	14.26	4.9	5,301	6,057	756
2.	Argenteuil,	Que.	4.17	15.8	12,381	12,897	516
7.	Bellechasse,	"	7.46	22.9	14,947	16,062	1,115
8.	Berthier,	"	19.63	9.0	16,390	19,608	3,218
9.	Bonaventure,	"	20.73	3.1	10,844	13,092	2,248
11.	Chambly,	"	2.31	93.0	12,835	13,132	297
13.	Charlevoix,	"	16.73	5.7	13,041	15,223	2,182
14.	Chateauguay,	"	3.75	64.9	17,192	17,837	645
16.	Compton,	"	16.81	7.5	7,006	8,184	1,178
17.	Deux-Montagnes,	"	1.02	65.8	18,352	18,164	-188
18.	Dorchester,	"	15.94	16.6	13,968	16,195	2,227
24.	Huntingdon,	"	15.15	42.1	15,190	17,491	2,301
25.	Iberville,	"	13.65	75.1	14,861	16,891	2,030
26.	Joliette,	"	16.35	7.3	18,218	21,198	2,980
27.	Kamouraska,	"	8.68	18.7	19,375	21,058	1,683
30.	Laprairie,	"	-4.87	89.5	15,216	14,475	-741
31.	L'Assomption,	"	2.89	68.3	16,866	17,355	489

STATEMENT F. -- COUNTIES GAINING LESS THAN 24 P.C. I.E. APPARENTLY
LOSING PART OF THEIR NATIVE INCREASE, 1851-61.-Concluded.

Number on Map	County	P.C. Increase 1851-61	Density 1851	Population		Increase
				1851	1861	
34.	L'Islet,	Que. 16.14	13.7	10,591	12,300	1,709
35.	Lotbinière,	" 20.61	22.9	16,597	20,018	3,421
36.	Maskinongé,	" 12.77	5.5	13,115	14,790	1,675
40.	Montcalm,	" 14.82	3.3	12,824	14,724	1,900
41.	Montmagny,	" 12.65	18.9	11,883	13,386	1,503
42.	Montmorency,	" 16.02	4.5	9,598	11,136	1,538
44.	Jesus Island,	" 4.00	108.6	10,103	10,507	404
45.	Napierville,	" 7.17	90.9	13,541	14,513	972
46.	Nicolet,	" 8.33	32.3	20,218	21,902	1,684
49.	Portneuf,	" 21.93	12.1	17,462	21,291	3,829
51.	Richelieu,	" 7.52	80.3	17,737	19,070	1,333
54.	Rouville,	" 1.63	73.8	17,935	18,227	292
57.	Sherbrooke,	" 21.70	20.4	4,847	5,899	1,052
58.	Soulanges,	" 6.16	84.7	11,512	12,221	709
59.	Stanstead,	" 19.53	23.7	10,255	12,258	2,003
60.	St-Hyacinthe,	" -0.62	68.3	18,994	18,877	-117
61.	St-Jean,	" -2.45	74.3	15,226	14,853	-373
62.	St-Maurice,	" 21.29	7.9	14,447	17,523	3,076
66.	Vaudreuil,	" 23.85	49.3	9,917	12,282	2,365
67.	Verchères,	" 7.05	72.7	14,465	15,485	1,020
69.	Yamaska,	" 12.14	46.4	16,932	18,987	2,055
3.	Brant,	Ont. 19.32	60.4	25,426	30,338	4,912
13.	Glengarry,	" 20.41	36.8	17,596	21,187	3,591
14.	Grenville,	" 16.83	44.7	20,707	24,191	3,484
24.	Lanark,	" 15.82	24.0	27,317	31,639	4,322
25.	Leeds,	" 18.06	33.6	30,280	35,750	5,470
26.	Lermox & Addington,	" 21.12	19.8	23,120	28,002	4,882
27.	Lincoln,	" 15.74	71.9	23,868	27,625	3,757
37.	Peel,	" 9.77	52.9	24,816	27,240	2,424
41.	Prince Edward,	" 10.49	48.4	18,887	20,869	1,982
46.	Stormont,	" 23.81	35.5	14,643	18,129	3,486
54.	Wentworth,	" 19.59	93.1	42,619	50,928	8,309
Total		14.13		1,100,165	1,255,594	155,429
All Eastern Canada		33.5		2,375,597	3,171,418	795,821
Remainder of Eastern Canada				1,275,432	1,915,824	640,392
The West and North		-4.1		60,700	58,215	-2,485
All Canada		32.6		2,436,297	3,229,633	793,336

THE DECADE 1861 -- 71

Growth. -- In this decade the population of Canada increased from 3,229,633 to 3,689,257, by 459,624 or 14.2 p.c., as compared with 793,336 or 32.6 per cent in the previous decade. This comparison must be very carefully examined. In the first place the immigrant population decreased absolutely by 91,074, leaving an increase of 550,698 native population as compared with about

570,687 in 1851-61, or 21.6 per cent of the native population of 1861. The native population did not increase as much, either absolutely or relatively, as it did in the previous decade. The previous decade's increase was partly due to an increase of about 220,000 immigrant population, and the slowing up of 1861-71 was similarly due to a decrease in this increment, so that there is a strong suggestion of a connection between the rapid increase of 1851-61 and the retarded increase of 1861-71.^{1/} In fact, if we had data by single years instead of by decades they would almost certainly show that there was no breach of continuity in the trend of growth as between this and the previous decade on the one hand and the following decade (in which the population increased nearly 18 per cent), on the other; e.g., the native population increased 28.9 per cent in 1851-61; 21.6 per cent in 1861-71, and 20 per cent in 1871-81. If we take the population as a whole over a 20-year period instead of a 10-year period, a more accurate illustration of the gradually diminishing rates of increase is provided than if we consider 1861-71 as a sort of lapse in continuity, for from 1851-71 the population increased 51.4 per cent; from 1861-1881, 33.9 p.c., while from 1871-1891 it increased 31 p.c.

Direction of Movement and Stage of Settlement.— Under these general conditions for the whole country, it will be interesting to observe the nature of the spread of the population as between counties. In the first place it is striking that, whereas there were 13 counties which in 1861 had a density of more than 80 per square mile, or the present density of Michigan or Indiana, there were only 9 such counties in 1871. This suggests that a part of the loss was from cities, also that these were partly points of distribution of the immigrant population from which a large number never spread to their destination, but left the country. For the sake of uniformity with the whole period studied, we are considering 14 per cent as the lowest limit of natural increase from 1851 to 1931. 87 out of the 147 counties of Eastern Canada increased less than this percentage, i.e., lost some of their native increase, while, if we consider 25 per cent as an upper limit to native increase, we have 33 more which probably lost some of their native increase and 28 which undoubtedly gained more than their native increase. 34 counties showed absolute decrease, 22 of these being in Quebec, and the remainder in Ontario. 23 of the counties increasing less than 14 p.c., which certainly lost some native increase and 10 out of the 33 which probably lost some native increase were in Quebec. On the other hand, of the 28 counties which almost certainly gained over and above their native increase, 5 were in the Maritimes, 10 in Quebec and 13 in Ontario.

As in the case of the previous decade, it will be interesting to observe the degree of settlement reached by the decreasing as compared with the increasing counties. Out of the 34 counties of Eastern Canada showing decreases in 1861, 24 had more than 40 persons, and 6 less than 20 per square mile, while of the 80 counties showing increases of more than 14 per cent, only 4 had reached 40 per square mile, while 41 had a density of less than 20. The population of the West meanwhile showed an increase of 79,475, mainly native Canadians. With the exception of the last mentioned it is clear that the spread of population in the decade was from the thickly settled parts of the provinces to the more thinly settled parts of the same. There was not as yet any great movement from Quebec to Ontario. The increase shown in the native population of all Canada indicates that the rate of natural increase must have been very high since there is strong evidence of emigration from the fact that the Canadian born population of the United States increased by 243,494 during the decade.

^{1/} The decrease in immigrant population in 1861-71 certainly came from some of the 220,000 increase in the previous decade and probably most of the decrease that was not due to death was from these 220,000.

The centre of population of Canada moved 1 mile south and 10 miles west to the county of Glengarry; this movement was largely due to the loss of population in the older parts of Quebec.

The situation as regards the movement of population in the decade was that 87 counties with an 1861 population of 1,955,175, increased less than 14 p.c., i.e. they increased only by 49,600 persons and thus were not even retaining their native increase. Another set of counties with 322,994 population in 1861 increased only 54,067, none of them gaining more than 20 p.c. It will be remembered that the native population of Canada increased 22 p.c. in addition to more than 10 p.c. leaving for the United States so that the natural increase was at least 20 p.c. (See Statement R). Even putting it at this figure, the population of counties gaining less than 20 p.c. was 2,278,169, and increased only 103,667, while a natural increase of 20 p.c. would give them an increase of 455,634, so that there was an outward movement of at least 351,967 from these counties. The remainder of Eastern Canada and the West gained 384,172 including their own natural increase. In other words about 352,000 besides emigrants moved from counties which in 1861 had 70 p.c. of the total population of Canada to counties which had 30 per cent and it has been pointed out that, with the exception of a gain of 80,000 in the West, these counties were the thinly but not very thinly settled counties of the East. Only 82,966 of the eastern gains were in counties with less than 10 to the square mile or with densities lower than that of the present New Brunswick. There was a city movement as shown by an increase of 26,000 in Montreal Island, but the gains were largely by counties which were fairly well settled in 1861, i.e., the exodus was a spread from thickly settled areas to contiguous less thickly settled areas.

Comparison with Previous Decade.- The comparison, then, between the growth of 1861-71 and that of 1851-61 would seem to be as follows: in the earlier decade the increase in the population of the country as a whole was the result of two factors, viz., heavy immigration and a high rate of natural increase. There was some outward movement from the most thickly settled parts, particularly in Quebec, to other well settled but more thinly settled areas, but on the whole, the decade was one of increase in density of areas already settled. In the later decade (1861-71) the increase in native population was well maintained, the rate of natural increase apparently dropping very slightly, but the immigrant population actually decreased by 91,000 which was a much higher figure than could be accounted for by deaths. Meanwhile, over the twenty years, a large number of immigrant arrivals were recorded; in 1851-61 there is a record of the arrival of 203,000 intending settlers and in 1861-71 of 178,000. Thus, there was an undoubted heavy emigration of immigrants in 1861-71, and it is impossible not to connect this with the immigration of the previous decade as well as of the one in which the emigration took place. The decade 1861-71, therefore, is characterized by an exodus of both immigrants and natives, the latter, however, moving largely to other parts of Canada, particularly the less thickly settled parts contiguous to the older and more thickly settled. The West gained over 50,000, so that a part of the native exodus went long distances. The exodus was mainly from Quebec and Ontario, particularly the former, the population of the Maritime Provinces remaining practically intact up to this period. The net result to the country as a whole was that whereas, in 1851-61, it increased 32 per cent, in 1861-71 it increased only 14 per cent, or absolutely 783,836 and 489,624 respectively, the difference

being caused by greater emigration to the United States and an actual decrease instead of a gain in the immigrant population.

Parallel Growth in United States.- It should be mentioned in this connection that, meanwhile, in the United States the population in 1850-60, increased by 8,251,000 or 36 p.c., while in 1860-70 it increased 7,115,000 or 23 p.c. Thus, there is a strong similarity between the behaviour of the two countries over the period.

As in the case of the previous decade, a statement is given below showing in this case the counties which gained population during 1861-71, with a general summary of the movement.

STATEMENT G. - COUNTIES IN EASTERN CANADA INCREASING MORE THAN 14 P.C.
IN 1861 - 71.

Number on Map	County		P.C. Increase 1861-71	Density 1861	Population		
					1861	1871	Increase
1.	Kings,	P.E.I.	15.7	31	19,931	23,068	3,137
2.	Prince,	"	32.3	28	21,401	28,302	6,901
3.	Cape Breton,	N.S.	26.8	21	20,866	26,454	5,588
4.	Colchester,	"	16.4	14	20,045	23,331	3,286
5.	Cumberland,	"	20.4	12	19,533	23,518	3,985
6.	Digby,	"	15.5	15	14,751	17,037	2,286
7.	Guysborough,	"	30.2	8	12,713	16,555	3,842
8.	Halifax,	"	16.2	24	49,021	56,963	7,942
9.	Hants,	"	22.0	14	17,460	21,301	3,841
10.	Inverness,	"	17.3	14	19,967	23,415	3,448
11.	Kings,	"	14.8	22	18,731	21,510	2,779
12.	Lunenburg,	"	21.4	17	19,632	23,834	4,202
16.	Shelburne,	"	16.4	11	10,668	12,417	1,749
17.	Victoria,	"	17.7	9	9,643	11,346	1,703
18.	Yarmouth,	"	20.1	18	15,446	18,550	3,104
2.	Carleton,	N.B.	21.8	12	16,373	19,938	3,565
4.	Gloucester,	"	24.8	8	15,076	18,810	3,734
5.	Kent,	"	20.5	9	15,854	19,101	3,247
7.	Madawaska,	"	51.2	4	4,786	7,234	2,448
10.	Restigouche,	"	14.4	1	4,874	5,575	701
13.	Victoria,	"	51.2	1	2,915	4,407	1,492
14.	Westmorland,	"	16.2	18	25,247	29,335	4,088
15.	York,	"	16.0	7	23,393	27,140	3,747
3.	Arthabaska,	Que.	31.3	20	13,134	17,241	4,107
5.	Beauce,	"	20.6	17	19,468	23,485	4,017
9.	Bonaventure,	"	21.6	4	13,092	15,923	2,831
15.	Chicoutimi,	"	32.2	0.5	8,933	11,812	2,879
16.	Compton,	"	46.5	9	8,184	11,988	3,804
19.	Drummond,	"	16.6	18	9,414	10,975	1,561
20.	Frontenac,	"	16.8	3	4,663	5,445	782
21.	Gaspé,	"	33.0	3	14,077	18,729	4,652
23.	Hull,	"	50.0	6	15,376	23,057	7,681
29.	Lac-St-Jean,	"	267.7	0.07	1,545	5,681	4,136
37.	Matane,	"	61.1	2	6,220	10,022	3,802

STATEMENT G. COUNTIES IN EASTERN CANADA INCREASING MORE THAN 14 P.C.
IN 1861 - 71.

Number on Map	County	P.C. Increase 1861-71	Density 1861	Population		
				1861	1871	Increase
38.	Mégantic, Que.	16.5	21	16,200	18,879	2,679
43.	Montreal Island, "	22.1	587	118,015	144,044	26,029
47.	Papineau, "	23.1	7	11,798	14,521	2,723
52.	Richmond, "	26.2	16	8,884	11,213	2,329
53.	Rimouski, "	18.9	7	14,634	17,396	2,762
57.	Sherbrooke, "	44.4	25	5,899	8,516	2,617
62.	St-Maurice, "	15.8	10	17,523	20,297	2,774
63.	Témiscouata, "	21.2	10	18,561	22,491	3,930
64.	Temiskaming, "	-	-	-	1,024	1,024
68.	Wolfe, "	34.7	10	6,548	8,823	2,275
4.	Bruce, Ont.	76.4	17	27,499	48,515	21,016
5.	Carleton, "	19.5	33	44,289	52,932	8,643
7.	Dufferin, "	56.8	19	10,644	16,689	6,045
11.	Essex, "	29.7	36	25,211	32,697	7,486
15.	Grey, "	57.6	21	36,391	57,352	20,961
17.	Haliburton, "	149.4	0.7	1,073	2,676	1,603
20.	Huron, "	48.3	34	44,632	66,165	21,533
22.	Kent, "	30.3	34	31,183	40,634	9,451
23.	Lambton, "	56.1	22	24,916	38,897	13,981
28.	Manitoulin, "	-	-	-	2,011	2,011
29.	Middlesex, "	22.2	55	67,613	82,595	14,982
30.	Muskoka, "	1575.0	0.2	320	5,360	5,040
36.	Parry Sound, "	-	-	-	1,559	1,559
38.	Perth, "	22.2	45	38,083	46,536	8,453
43.	Renfrew, "	37.7	7	20,325	27,977	7,652
44.	Russell, "	27.4	17	6,824	8,696	1,872
45.	Simcoe, "	45.6	23	38,983	56,762	17,779
48.	Thunder Bay, "	-	-	-	438	438
50.	Victoria, "	32.5	17	22,408	29,685	7,277
53.	Wellington, "	23.8	45	45,355	56,128	10,773
Total		29.5		1,216,243	1,575,007	358,764
All Eastern Canada		12.9		3,171,418	3,579,782	408,364
Remainder of Eastern Canada		2.5		1,955,175	2,004,775	49,600
The West and North		88.1		58,215	109,475	51,260
All Canada		14.2		3,229,633	3,689,257	459,624

THE DECADE 1871-81.

Growth.- In this decade the population of Canada increased from 3,689,257 to 4,324,810, by 635,553 or 17.2 p.c., a considerably higher rate than in the previous decade. As before, these figures should be examined. The immigrant population increased by 11,409, while in the previous decade it decreased by 91,074. Thus, the native population increased by 624,144 as compared with 550,698 in 1861-71 or 20.1 p.c. in 1871-81, as compared with

21.6 p.c. in 1861-71. The increase in native population continued its gradual slowing up. Thus the high rate of increase in 1871-81 as compared with 1861-71 was entirely a matter of immigration. The recorded immigrant arrivals of this decade were 342,000 intending settlers as compared with 179,000 in the previous, and the result was an increase in the immigrant population of 11,000 instead of a decrease of 91,000 as in the previous decade.

Direction of Movement and Stage of Settlement.- In this review of the growth of the country as a whole, we may consider the movement within, as shown by the behaviour of the counties. Out of 151 counties, in 1871, 15 showed absolute decreases; 64 showed an increase of less than 14 p.c., i.e. undoubtedly lost native increase; while, if we consider 20 p.c. as a reasonable native increase (See Statement R) 23 more counties showed increases of less than 20 per cent, and 45 showed increases of more than 20 p.c. Of the 635,553 increase in the decade, 358,050 was in the last mentioned 45 eastern counties and 58,690 in the West, in a population which in 1871 was 1,154,094; while only 218,813 was in the remaining 2,535,163 population, if we place the native increase at 20 per cent, these latter must have transferred about 288,000 of their native increase to other areas, a transfer lighter than in the previous decade by probably some 64,000. There was also a much lighter movement to the West.

The centre of population for Canada moved 3 miles north and 20 miles west to the county of Stormont. This was mainly because 11 out of the 15 counties showing decreases, and 24 out of the 28 counties which must have lost some native increase, were east of Ontario. Although the Maritime Provinces, up to 1881, showed no actual decrease except in the solitary case of Sunbury, N.B., the increase had slowed down to a point that indicated a considerable loss of native increase.

It is significant that the outward movement in this decade differed somewhat from that of the two previous decades, in that it had descended from the counties of greatest density to those of between 60 and 80 to the square mile, i.e., there was a slight indication of the outward movement extending to lower categories. As yet, however, 73.3 per cent of the counties decreasing were over 40 to the square mile, but this compared with 70 p.c. in 1861-71 and 100 p.c., in 1851-61.

Comparison with Previous Decade.- On the whole, the exodus from counties was less in 1871-81 than in 1861-71, but only slightly. The Canadian born population of the United States increased by 223,693 in the decade, presupposing at least as great an emigrant movement as in the previous decade. There seemed to be a slowing up of the spread to contiguous areas, also to distant areas of Canada which increased less by 21,000 than in the previous decade. In fact, the outward movement for counties up to 1871 had all the appearance of a healthy and natural form of growth. Meanwhile, there is evidence (in Statement R) of a continuous slowing up of the rate of natural increase. The spread of the native population in an orderly manner was showing symptoms of cessation by 1881.

Meanwhile it must be remembered that 203,743 intending settlers arrived from abroad in 1851-61, 178,814 in 1861-71, and 341,955 in 1871-81, amounting to 724,512 in the three decades. In the final result, the immigrant population was some 140,000 more in 1881 than in 1851 and 80,000 less in 1881 than in 1861. In 1851-61 about 220,000 were retained, in 1861-71, 91,000 were lost, while in 1871-81, 11,000 were retained - how temporarily will be seen when examining the

next decade. The retention of the 11,000 immigrants instead of the loss of 91,000 caused a greater rate of increase in Canada in 1871-81 than in the previous decade.

Parallel Growth in the United States.- As in previous cases, it may be mentioned that the population of the United States likewise increased in somewhat the same manner in the three decades, viz. over 30 p.c. in 1850-60, about 23 p.c. in 1860-70 and over 30 p.c. in 1870-80, the last mentioned showing, as in the case of Canada, a greater rate than 1860-70.

A statement is given below showing the counties which increased more than 14 p.c. in 1871-81. As already explained, the reason for taking 14 p.c. is to insure throughout the improbability of any county which held all its native increase being omitted. Since the counties are given individually, it will be easier to select from them those gaining less than the probable native increase of the decade, viz. 20 p.c. per decade.

STATEMENT H. - COUNTIES OF EASTERN CANADA INCREASING MORE THAN 14 P.C.
IN 1871-81.

Number on Map	County		P.C. Increase 1871-81	Density 1871	Population		
					1871	1881	Increase
1.	Kings,	P.E.I.	14.6	36	23,068	26,433	3,365
2.	Prince,	"	21.4	36	28,302	34,347	6,045
3.	Cape Breton,	N.S.	17.1	27	26,454	31,258	4,804
4.	Colchester,	"	14.5	16	23,331	26,720	3,389
5.	Cumberland,	"	16.4	14	23,518	27,368	3,850
6.	Digby,	"	16.7	18	17,037	19,881	2,844
8.	Halifax,	"	19.2	28	56,963	67,917	10,954
12.	Lunenburg,	"	19.9	20	23,834	28,583	4,749
16.	Shelburne,	"	20.1	13	12,417	14,913	2,496
18.	Yarmouth,	"	14.7	22	18,550	21,284	2,734
1.	Albert,	N.B.	15.5	16	10,672	12,329	1,657
2.	Carleton,	"	17.2	15	19,938	23,365	3,427
4.	Gloucester,	"	14.9	10	18,810	21,614	2,804
5.	Kent,	"	18.4	11	19,101	22,618	3,517
7.	Madawaska,	"	19.9	6	7,234	8,676	1,442
8.	Northumberland,	"	24.8	4	20,116	25,109	4,993
10.	Restigouche,	"	26.6	2	5,575	7,058	1,483
13.	Victoria,	"	59.1	2	4,407	7,010	2,603
14.	Westmorland,	"	28.6	20	29,335	37,719	8,384
2.	Argenteuil,	Que.	16.7	16	12,806	14,947	2,141
5.	Beauce,	"	15.8	21	23,485	27,201	3,716
9.	Bonaventure,	"	18.8	5	15,923	18,908	2,985
10.	Brome,	"	15.1	28	13,757	15,827	2,070
12.	Champlain,	"	20.2	2	21,254	25,550	4,296
13.	Charlevoix,	"	14.7	7	15,611	17,901	2,290
15.	Chicoutimi,	"	16.8	0.7	11,812	13,801	1,989
16.	Compton,	"	26.1	13	11,988	15,115	3,127
19.	Drummond,	"	28.8	21	10,975	14,130	3,155
20.	Frontenac,	"	70.5	4	5,445	9,285	3,840
21.	Gaspé,	"	33.5	4	18,729	25,001	6,272
23.	Hull,	"	25.3	9	23,057	28,891	5,834

STATEMENT H.- COUNTIES OF EASTERN CANADA INCREASING MORE THAN 14 P.C.
IN 1871 - 81. Concluded.

Number on Map	County		P.C. Increase 1871-81	Density 1871	Population		Increase
					1871	1881	
26.	Labelle,	Que.	514.0	0.1	336	1,727	1,391
29.	Lac-St-Jean,	"	71.3	0.2	5,681	9,729	4,048
37.	Matane,	"	35.1	3	10,022	13,544	3,522
43.	Montreal Island,	"	34.1	717	144,044	193,171	49,127
46.	Nicolet,	"	15.5	37	23,262	26,874	3,612
47.	Papineau,	"	29.6	9	14,521	18,814	4,293
48.	Pontiac,	"	21.5	0.2	15,501	18,840	3,339
52.	Richmond,	"	30.2	21	11,213	14,598	3,385
53.	Rimouski,	"	16.4	8	17,396	20,247	2,851
55.	Saguenay,	"	61.8	0.02	5,487	8,879	3,392
56.	Shefford,	"	21.8	34	19,077	23,233	4,156
57.	Sherbrooke,	"	43.5	36	8,516	12,221	3,705
59.	Stanstead,	"	18.4	30	13,138	15,556	2,418
62.	St-Maurice,	"	16.0	11	20,297	23,550	3,253
65.	Terrebonne,	"	17.2	25	19,591	22,969	3,378
68.	Wolfe,	"	33.1	13	8,823	11,741	2,918
2.	Algoma,	Ont.	51.8	0.2	4,569	6,934	2,365
4.	Bruce,	"	34.4	29	48,515	65,218	16,703
5.	Carleton,	"	21.1	56	52,932	64,103	11,171
7.	Dufferin,	"	32.3	30	16,689	22,084	5,395
10.	Elgin,	"	25.8	47	33,666	42,361	8,695
11.	Essex,	"	43.6	46	32,697	46,962	14,265
15.	Grey,	"	23.0	34	57,352	70,539	13,187
17.	Haliburton,	"	120.9	2	2,676	5,911	3,235
20.	Huron,	"	15.7	51	66,165	76,526	10,361
21.	Kenora,	"	—	—	—	4,564	4,564
22.	Kent,	"	33.7	44	40,634	54,310	13,676
23.	Lambton,	"	33.8	35	38,897	52,034	13,137
28.	Manitoulin,	"	320.7	1	2,011	8,460	6,449
30.	Muskoka,	"	142.0	3	5,360	12,973	7,613
36.	Parry Sound,	"	812.8	0.4	1,559	14,231	12,672
38.	Perth,	"	15.4	55	46,536	53,693	7,157
40.	Prescott,	"	29.5	36	17,647	22,857	5,210
43.	Renfrew,	"	37.6	9	27,977	38,482	10,505
44.	Russell,	"	50.4	21	8,696	13,080	4,384
45.	Simcoe,	"	31.8	34	56,762	74,803	18,041
46.	Stormont,	"	22.2	46	18,987	23,198	4,211
48.	Thunder Bay,	"	826.0	0.01	438	4,056	3,618
52.	Welland,	"	23.3	67	25,760	31,771	6,011
53.	Wellington,	"	15.2	55	56,128	64,641	8,513
54.	Wentworth,	"	16.2	126	57,599	66,952	9,353
55.	York,	"	32.0	131	115,974	153,113	37,139
Total			27.1		1,746,635	2,220,308	473,673
All Eastern Canada			16.1		3,579,782	4,156,645	576,863
Remainder of Eastern Canada			5.6		1,833,147	1,936,337	103,190
The West and North			53.6		109,475	168,165	58,690
All Canada			17.2		3,689,257	4,324,810	635,553

THE DECADE 1881-91.

Growth. In this decade the population of Canada increased from 4,324,810 to 4,833,239, by 508,429 or 11.8 p.c., the lowest rate and the lowest absolute increase since 1851. The immigrant population increased 40,887, so that the increase in native population, also the lowest since 1851, was 467,542, compared with 624,144 in 1871-81 and 550,698 in 1861-71. Since the population on which this native increase was based, was greater in 1881 than at the previous dates the rate (on the whole population) was 10.8 in 1881-91, as compared with 16.9 p.c. in 1871-81, and 17.1 p.c. in 1861-71. Or, as in former comparisons, the native population increased 21.6 p.c. in 1861-71, 20.1 p.c. in 1871-81 and 12.6 p.c. in 1881-91. The recorded immigrant arrivals of the decade were 886,177 intending settlers, to be compared with the total increase in immigrant population of 40,887. Since the Canadian born population of the United States increased by 263,781 in this decade, the emigration appears to have exceeded one million.

Direction of Movement and Stage of Settlement. We shall now consider the behaviour of this growth in counties. Out of 152 counties in 1881, 61 showed absolute decreases, 59 showed increases of less than 14 p.c., i.e. almost certainly failed to retain all their native increase; 10 increased over 14 but less than 20 (to compare with previous decades), while only 24 eastern counties gained more than 20 p.c., two of which were counties which in 1881 had no population. Of the 508,429 total increase, 329,864 was in 34 eastern counties increasing more than 14 p.c. and 181,481 in the West, leaving an absolute decrease of 2,916 in the 120 remaining eastern counties. To put it in another way, 329,864 of the increase was in eastern counties which had 931,462 population in 1881, 181,481 in the West which had 168,165 in 1881, while there was a net loss of 2,916 in the remaining eastern counties which had 3,225,183 population in 1881 (i.e. nearly 75 p.c. of the whole population of that year).

The increase in the Canadian born population of the United States is direct evidence that the decade 1881-91 saw a net emigration of native population from Canada amounting to not less than 263,781 (See Statement Q). It will be noticed that there was an increase of 108 p.c. in the West and of 35 p.c. in the 34 eastern counties increasing more than 14 p.c. After allowing for the native increase of these two sets, it would seem that of the native Canadians moving from the counties losing their native increase rather more than half went to other parts of Canada, while less than half emigrated. This is a striking point, considering the greater difficulties of travel to distant parts of Canada than to points in the United States and that there were then no restrictions on immigration to the latter country.

The movement to the West in this decade is noteworthy, and was largely Canadian born. Of the increase of 181,481 in Manitoba, British Columbia and the Northwest Territories the Canadian born made up 106,130, the British and foreign 75,351. Since the immigrant population of all Canada increased only 40,887 it would seem that there was a large exodus of the old immigrant population from the East, some of them probably moving west with the Canadians.

Comparison with Previous Decades. In the eastern counties there was a definite departure from the trend of the previous three decades,

In the first place, up to 1881 the trend of growth in the Maritime counties was practically intact, except for certain symptoms of a slowing up of the growth. In contrast, in 1881-91, out of the 61 eastern counties showing absolute decreases, 16 were in the Maritimes, 8 of the 18 counties of Nova Scotia showing decreases; 26 were in Quebec and 19 were in Ontario. If, however, we count as decreasing the counties failing to hold their native increase, at least 33 were in the Maritimes, 53 in Quebec and 37 in Ontario. The exodus had spread from Quebec first to Ontario and now to the Maritimes. Of the 29 counties into which this exodus - what remained of it in Eastern Canada - seemed to flow, 3 were in the Maritimes, 13 in Quebec and 13 in Ontario. Out of an increase of 329,864 in the still growing counties of the East (those gaining more than 14 p.c. in the decade), 200,031 were in Montreal Island, Carleton, Ont., Wentworth and York, Ont.; 174,542 being in Montreal, Ottawa, Hamilton and Toronto. In fact the inward movement was almost entirely urban, except an increase of 23,453 to the very thinly settled counties of Nipissing, Parry Sound, Algoma, Sudbury and Rainy River. The decade was an emptying of the eastern counties into the cities, the North West and outside Canada.^{1/} The Canadian centre of population moved 12 miles north and 54 miles west to the county of Carleton, Ontario, due not only to the increase in the Northwest and new counties of northwestern Ontario, but also to the exodus from the Maritime Provinces.

Changes in Age Distribution.- In this decade we notice a remarkable change in the age distribution throughout Canada. In 1881 the proportion under 25 years of age was 59.96; in 1891 it was 57.11 a decrease of 2.85; but the age group under 5 years decreased from 13.84 to 12.65 or by 1.19. Ages over 70 increased in proportion 11 p.c. In Nova Scotia, persons under 10 years of age actually decreased by 7,502, while persons over 70 increased by 2,983, similar absolute decreases occurring in Prince Edward Island, New Brunswick and Ontario. Thus it would seem that there was either a fall in birth rate accompanying the exodus, or that a large proportion of those moving out were families with young children - probably both.

While the outward movement was thus general, it can not be said that there was any breach of continuity between it and the previous decade, the difference being that the outward movement in former decades was more largely to other parts of Canada, while in this decade nearly half of it was to outside parts. Further, while it was heavier than formerly, it is clear that this is in line with a trend which began in 1851 and continued at an accelerating rate. New parts of Canada were not opened up fast enough to take the whole of the outflow, and it is remarkable that the proportion of the outflow which these new parts appropriated was so large.

Parallel Growth in the United States.- Meanwhile it can not be said that the movement away from Canada was in sympathy with an unusually heavy movement into the United States, which increased at a much slower rate in this decade than in the previous, thus challenging the popular conception that the movement out of one country is preponderatingly caused by special inducements in the country to which the movement is directed.

For uniformity of treatment with earlier decades a statement is given below showing the individual counties which gained over 14 p.c. in 1881-91 with a summary of the gains or losses of the other parts of Canada.

1/ As stated above the Canadian born population of the United States increased 263,781 in this decade. In calculating the gross outward movement allowance should be made for the deaths in the United States of the persons of whom these 263,781 were survivors, also of any returning Canadians. The Canadian born emigrants from Canada must have exceeded 300,000 in the decade.

STATEMENT I.- COUNTIES OF EASTERN CANADA INCREASING MORE THAN 14 P.C.

IN 1881-91.

Number on Map	County		P.C. Increase 1881-91	Density 1881	Population		Increase
					1881	1891	
5.	Cumberland,	N.S.	26.2	16	27,368	34,529	7,161
4.	Gloucester,	N.B.	15.2	12	21,614	24,897	3,283
7.	Madawaska,	"	21.2	7	8,676	10,512	1,836
10.	Restigouche,	"	17.7	2	7,058	8,308	1,250
3.	Arthabaska,	Que.	21.4	29	19,153	23,254	4,101
16.	Compton,	"	15.0	16	15,115	17,386	2,271
19.	Drummond,	"	17.8	27	14,130	16,639	2,509
20.	Frontenac,	"	33.9	7	9,285	12,431	3,146
23.	Hull,	"	26.8	12	28,891	37,712	8,821
28.	Labelle,	"	310.9	0.7	1,727	2,676	949
29.	Lac-St-Jean,	"	44.4	0.4	9,729	14,048	4,319
38.	Mégantic,	"	16.7	24	19,056	22,233	3,177
43.	Montreal Island,	"	43.7	961	193,171	277,525	84,354
47.	Papineau,	"	22.1	12	18,814	22,972	4,158
57.	Sherbrooke,	"	31.6	51	12,221	16,088	3,867
59.	Stanstead,	"	16.1	36	15,556	18,067	2,511
64.	Temiskaming,	"	73.2	0.1	1,099	1,903	804
68.	Wolfe,	"	27.9	17	11,741	15,018	3,277
2.	Algoma,	Ont.	95.2	0.4	6,934	13,534	6,600
5.	Carleton,	"	21.1	68	64,103	77,630	13,527
11.	Essex,	"	18.3	66	46,962	55,545	8,583
28.	Manitoulin,	"	27.6	5	8,460	10,794	2,334
30.	Muskoka,	"	20.8	8	12,973	15,666	2,693
31.	Nipissing,	"	500.6	0.2	1,774	10,654	8,880
36.	Parry Sound,	"	48.6	3	14,231	21,152	6,921
42.	Rainy River,	"	-	-	-	2,210	2,210
43.	Renfrew,	"	22.1	13	38,482	46,977	8,495
44.	Russell,	"	39.8	32	13,080	18,289	5,209
46.	Stormont,	"	17.1	56	23,198	27,156	3,958
47.	Sudbury,	"	-	-	-	4,842	4,842
48.	Thunder Bay,	"	97.2	0.08	4,056	8,000	3,944
51.	Waterloo,	"	18.1	83	42,740	50,464	7,724
54.	Wentworth,	"	15.2	146	66,952	77,114	10,162
55.	York,	"	60.1	174	153,113	245,101	91,988
Total			35.41		931,462	1,261,326	329,864
All Eastern Canada			7.9		4,156,645	4,483,593	326,948
Remainder of Eastern Canada			- 0.09		3,225,183	3,222,267	- 2,916
The West and North			107.92		168,165	349,646	181,481
All Canada			11.76		4,324,810	4,833,239	508,429

THE DECADE 1891-1901.-

Growth.- In this decade the population of Canada increased from 4,833,239 to 5,371,315, by 538,076 or 11.1 per cent, the smallest relative increase recorded for the area now known as Canada. The immigrant population increased by 55,629 so that the native population increased only by 482,447 compared with

467,542 in the previous decade, 624,144 in 1871-81 and 550,698 in 1861-71. This native increase in 1891-1901 was only 10.0 p.c. of the total population of 1891. To put it in another way the native population increased 21.6 p.c. in 1861-71; 20.1 p.c. in 1871-81; 12.6 p.c. in 1881-91 and 11.5 p.c. in 1891-1901. The total recorded immigrant arrivals of the decade was 321,302 intending settlers to be compared with a total increase in immigrant population of 55,629. The Canadian born population of the United States increased by 198,984 presupposing a native emigration during the decade of not much less than 300,000.

Direction of Movement and Stage of Settlement.— Out of 154 counties in Eastern Canada in 1891, 67 showed absolute decreases, 60 showed increases of less than 14 p.c.; 9 showed increases of 14 and less than 20 (to compare with previous decades) and only 20 showed increases of more than 20 p.c., 2 of which had no population in 1891. Of the 242,205 increase in Eastern Canada, 233,962 or about 96 p.c. was in 29 counties. The West gained 295,871.

The centre of population moved 20 miles north and 61 miles west to Renfrew county, Ontario.

Examining the gains and losses by their location we find that 19 out of the 29 counties above mentioned as approximating 96 p.c. of the increase were in Quebec and the Maritimes; of the counties suffering absolute decreases, 20 were in the Maritimes, 20 in Quebec and 27 in Ontario. In Quebec 15 counties which decreased in the previous decade showed recovery in 1891-1901. Indeed one county, St Maurice showed in this decade the highest rate of increase since 1851, and Montcalm, which had been decreasing since 1861, showed an appreciable increase.

In Ontario practically all the increase went to the north western very thinly settled counties, with the one exception of Carleton county which increased by 19,274. In Quebec 83,313 of the increase went to Montreal Island, but a good proportion went to the northern thinly settled centres.

Comparison with Previous Decades.— In spite of the fact that there was a somewhat greater concentration of the high increases in 1891-1901 in a few areas than in the previous decade, there is definite change in the trend of movement. Thus in the previous decades what remained in Eastern Canada of the exodus went mainly to the cities; in 1891-1901 there was a trek to new areas, and, of course, a larger trek to the West. Thus 16 out of the 29 eastern counties showing increases greater than 14 p.c. had, in 1891, densities of less than 5 per square mile, while 10 had less than 1 per square mile. The only large eastern cities that gained more than a moderate natural increase were Montreal and Ottawa. Toronto increased only 25,000 or about 14 p.c. The six cities, Toronto, Hamilton, Quebec, London, Halifax and Saint John gained only 46,181 or 11.5 p.c. that is, almost certainly did not hold all their native increase, while in 1881-91, the same cities gained 103,835 or 34.7 p.c.

The trend of growth in this decade (1891-1901) seems to be capable of division into two sharply defined periods. The first of these was characterized by a continuation of the movement away from Canada and into cities as described for 1881-91, only on a still greater scale; the second was a period of recovery for Canada as a whole, also a movement into new areas and the West. This may be demonstrated in two ways. In the first place the children under 5 years of age who increased only 13,000 in 1881-91, increased 39,000 in 1891-1901 while in the Maritime Provinces where they showed absolute decreases in the former decade,

they showed increases in the latter. In the second place, out of the total immigrant population of 699,500 in 1901, as many as 159,283 arrived after 1896. It will be remembered that the immigrant population in the decade increased only 55,629, so that the immigrant population arriving before 1896 must have decreased 103,654, presumably in the earlier part of the decade. Looking at it in another way, out of a total increase of 538,076 in all Canada, 159,283 or more than one fourth were immigrants arriving after 1896, and another part of the increase was manifestly either due to a greater birth rate in the last 5 years of the decade or the non emigration of families in the same period. The rate of increase of the population of Canada must have reached almost a vanishing point sometime between 1891 and 1896.

Parallel Growth in the United States. Meanwhile the United States, which from 1850 to 1890 grew along lines somewhat parallel with Canada, seemed to have settled down to a steadily diminishing rate of growth, which has been maintained to the present. The parallel between the two countries thus no longer holds. As before, a statement is given below presenting the individual places showing gains of more than 14 p.c. with a summary of the gains in other parts of Canada.

STATEMENT J. COUNTIES OF EASTERN CANADA INCREASING MORE THAN 14 P.C.

IN 1891 ~ 1901

Number on Map	County		P.C. Increase		Population		
			1891	1901	1891	1901	Increase
3.	Cape Breton,	N.S.	43.6	35	34,244	49,166	14,922
7.	Madawaska,	N.B.	17.1	8	10,512	12,311	1,799
10.	Restigouche,	"	33.1	3	8,308	10,586	2,278
13.	Victoria,	"	14.5	4	7,705	8,825	1,120
1.	Abitibi,	Que.	—	—	—	2,405	2,405
6.	Beauharnois,	"	30.4	113	16,662	21,732	5,070
9.	Bonaventure,	"	17.6	6	20,835	24,495	3,660
12.	Champlain,	"	17.1	3	27,335	32,015	4,680
15.	Chicoutimi,	"	18.5	0.8	14,244	16,872	2,628
20.	Frontenac,	"	39.6	9	12,431	17,358	4,927
21.	Gaspé,	"	14.2	6	26,875	30,683	3,808
28.	Labelle,	"	198.5	1	2,676	7,175	4,499
29.	Lac-St-Jean,	"	43.5	0.6	14,048	20,156	6,108
37.	Matane,	"	39.9	4	14,621	20,456	5,835
43.	Montreal Island,	"	30.0	138.1	277,525	360,838	83,313
57.	Sherbrooke,	"	14.5	68	16,088	18,426	2,338
62.	St-Maurice,	"	27.3	13	23,033	29,311	6,278
64.	Temiskaming,	"	124.9	0.2	1,903	4,280	2,377
65.	Terrebonne,	"	16.0	30	23,128	26,816	3,688
2.	Algoma,	Ont.	86.7	0.7	13,534	25,273	11,739
5.	Carleton,	"	24.8	82	77,630	96,904	19,274
21.	Kenora,	"	108.1	0.3	4,984	10,369	5,385
30.	Muskoka,	"	33.9	10	15,666	20,971	5,305
31.	Nipissing,	"	62.4	1	10,654	17,306	6,652
36.	Parry Sound,	"	17.9	5	21,152	24,936	3,784
42.	Rainy River,	"	197.2	0.3	2,210	6,568	4,358
47.	Sudbury,	"	232.6	0.3	4,842	16,103	11,261
48.	Thunder Bay,	"	40.2	0.2	8,000	11,219	3,219
49.	Timiskaming,	"	—	—	—	1,252	1,252
Total			32.9		710,845	944,807	233,962

STATEMENT J.- COUNTIES OF EASTERN CANADA INCREASING MORE THAN 14 P.C.

In 1891-1901. -- Concluded.

Number on Map	County	P.C. Increase	Density 1891	Population		
		1891-1901		1891	1901	Increase
All	Eastern Canada	5.4		4,483,593	4,725,798	242,205
	Remainder of Eastern Canada	0.2		3,772,748	3,780,991	8,243
	The West and North	84.6		349,646	645,517	295,871
	All Canada	11.1		4,833,239	5,371,315	538,076

SUMMARY 1851-1901.-

This brings us to the end of a survey of the latter half of the 80-year period which has been mentioned as marking a definite stage in the growth of population in Canada. As has been seen, the growth during this period for Canada as a whole followed with a high degree of precision a mathematical trend, and it is now possible to comment on the reasons for this precision. Up to 1881, the growth was one of settlement of the older areas bringing them up to a fair degree of density. There was little settlement of the newer eastern areas, and only a small overflow to the West. The centres of population moved very little. Immigration seems to have balanced any movement away from the older districts. At the same time there was a gradual slowing up of the growth. This seems to have been in small part due to the lowering of the rate of natural increase, but principally to emigration. But the remarkable fact is, although the next twenty years saw a heavy outward movement from the settled areas and from Canada as a whole, the trend of growth in Canada was not changed. It was simply a continuation of the gradual ageing which could have been predicted as early as 1871, and which would have enabled a fair estimate in 1871 of the population of 1901. It was merely a matter of what means would be followed in bringing about a retardation of population growth - high death and low birth rate or emigration. As a matter of fact both methods were in evidence. The rate of natural increase seems to have dropped rapidly from 1861 to 1901 but not rapidly enough to have forestalled a moving out. The greater part of the outward movement from the settled counties seems to have gone at first to newer parts of Canada, and it would seem that the inaccessibility of these newer parts had at least as much to do with the increasing emigration of the period as the lack of large cities. The emigration was heavy but it was unexpectedly small as compared with the spread in Canada considering the easiness of access to the United States.

The outward movement seems to have begun in Quebec and spread to Ontario, while the Maritime Provinces were affected last. The Maritimes maintained increases intact until the decade 1881-91, while Quebec counties showed decreases as early as 1851-61 and Ontario as early as 1861-71. With this in view it is interesting to observe that, in the heavy movement of 1881-91 the Maritimes suffered the most while Quebec showed the least, i.e. the decreases began with the oldest and most thickly settled counties, spreading to the others. In the decade of the greatest outward movement of all, 1891-1901 recovery was manifest in those which had been the first to lose population.

It is also remarkable that although from 1851 to 1901 the recorded arrivals of immigrant intending settlers aggregated 1,931,991 in addition to about an equal number in transit to the United States, the immigrant population in this 50-year period increased less than 240,000 and only 16,851 from 1861-1901. Of the 699,500 immigrant population of 1901, 159,283 arrived after 1896 and 74,674

arrived between 1891 and 1895, so that of the immigrants arriving before 1891 only 465,543 survived till 1901 and 68,148 of these arrived before 1851. Out of more than 1,600,000 arriving between 1851 and 1891 only 397,395 were alive in Canada in 1901. Calculating on the basis of the years of arrival and at a death rate probably higher than the actual, the deaths of these 1,600,000 should be 372,000 about half of whom probably died in Canada, so that about 1 immigrant arrival stayed in Canada for every 2 who left. Meanwhile the arrivals before 1851 were also dying or leaving with the result of only a net gain of less than 240,000 in the 50 years.

THE DECADE 1901-11.-

Growth.— The population of Canada grew in this decade from 5,371,315 to 7,206,643, an increase of 1,835,328, the greatest absolute increase in Canada's history. The increase included 887,461 from immigration.

Direction of Movement and Stage of Settlement.— This decade marks not so much the beginning of a new stage of growth as the preparations for this new stage. The large increase of this decade (34p.c.) was not wholly a movement into the Prairie Provinces and British Columbia, although the centre of population moved 57 miles north and 197 miles west to Sudbury county; it was also in part, though in very small part, a recovery of the older provinces. At the same time 60 counties in Eastern Canada showed actual decreases, and 55 counties showed increases of less than 14 p.c., i.e., must have lost natural increase. The losses were particularly heavy among counties of moderately dense population, i.e. of between 40 and 60 per square mile. The counties gaining more than native increase should be particularly interesting in this decade. As many as 11 were counties with cities. These accounted for 490,982 of the increase; 19 were counties which in 1901 had a very low degree of density, i.e. were new settlements. These accounted for 173,856 of the increase. The two sets combined accounted for 664,838 of the increase in Eastern Canada. The West accounted for an increase of 1,090,103. The remaining counties of Canada, therefore, gained only 80,387 out of the total gain of 1,835,328 in Canada in the decade, i.e., lost all their native increase except this number. The Canadian born population of the United States increased 24,715 in this decade (Over the 1890 population of 1,179,922). This presupposed an emigration from Canada to the United States of about 200,000 after allowing for deaths in addition to the equivalent of returning Canadians. The counties of Nova Scotia and Prince Edward Island, the older counties of New Brunswick and the Ontario counties without cities showed heavy losses; the counties of Quebec and the newer parts of New Brunswick showed gains. Even some of the older counties of Quebec, to the number of 13, which had shown absolute decreases in the previous decade showed symptoms of recovery in this decade but on the whole the increases in Quebec were due to cities and the newer areas. In Ontario there were no such symptoms; the outflow of the previous decade was continued at a greater rate. The increases in this province were practically all due to cities and new areas. The partial recovery of the counties of Quebec is interesting and it should be noted that this recovery began before the previous decade, and consequently could not have been due to a general inward movement such as is usually associated with the decade 1901-11. Rather it would seem to be a reaction of some sort to the heavy drain which began before 1851 in Quebec and spread to the other provinces. It is difficult to say whether or not such reaction is a necessary phase in population growth, but this fact is noticeable when all the counties of Canada are taken individually and their growth traced from 1851 to 1931, three of the four counties decreasing in 1851-61, 25 out of 34 decreasing in 1861-71, 12 out of 21 decreasing in 1871-81, and

24 out of 56 decreasing in 1881-91 made definite recoveries before 1931, while most of the remainder either made partial recoveries or showed symptoms of recovery by a steady diminution of their rates of decrease. Many of these recoveries were due to the rise of cities, but many others are not explainable on this ground. Another remarkable fact is that these recoveries did not necessarily synchronize with a large increase in the population of Canada as a whole. Thus 16 occurred in 1891-1901 the decade of the lowest rate of increase on record in the population of Canada.

On consulting Chart 2 it appears that the decade 1901-11 was a phase interjected between two trends of growth in the population of Canada and comparable to phases at previous periods, especially before 1831 and 1791. The growth in the decade was amorphous or freakish when viewed from the standpoint of the general law of growth which we have taken as a standard (viz. progressively diminishing rates of increase). Thus the increase of 34 per cent was not only abnormally high, but the manner of reaching this was apparently one which, if kept up would have given Canada an inconceivable population in a few decades. Even an increase according to the compound interest law at this rate would have multiplied the population 18.6 times in a hundred years, i.e. would have brought the population of Canada to 100 million by the year 2000 A.D.; but the manner in which it did actually increase would have more than doubled this figure. This manner apparently continued until around the year 1913 when it is estimated that the population increased over 3 per cent in a single year making a decennial rate of about 40 per cent. Such a manner of increase clearly ignored limitations which must be reckoned with regardless of any theory of population growth. The foregoing description of the growth of counties during the decade will throw some light on this anomalous behaviour.

Special Features of the 1901-11 Growth. It must be remembered that the decade just described had a parallel at different dates in the past. The period around 1851 was similar to this decade particularly in one aspect. The large increase in 1851-61 was due to the acquisition to the population of some 220,000 immigrants while the following decade showed a decrease of 91,000 immigrant population. In other words a considerable part of the increase in 1851-61 was not a genuine permanent population, but in some respects merely an aggregate of persons as yet undecided whether or not they would become a population. It will be seen that the decade 1901-11 showed the same type of increase.

First it is clear that with the exception of a few cases of recovery, the growth of the decade was not due to any stimulus to the counties already settled; indeed, the draining of these counties which began in 1881-91 continued at an even greater pace. In the second place, while the rendering accessible of new areas accounted for a large part of the outward movement from the older settled parts (migration within Canada instead of emigration, so that Canada retained more of her natural increase), this did not account for all the growth which took place. The stimulus given to cities by the movement accounts for some more, but all the factors just mentioned did not account for the exceptional growth of the decade.

Distribution Points. It would seem that this exceptional aspect arose from the fact that a certain portion of the population of 1911 was still located at distributing points, i.e. points of temporary residence and that it was then uncertain whether these would be later distributed in settling the newer areas or pass out of the country.

This may be illustrated in several ways. In the first place, of the immigrant population of 1911, 301,648 arrived in 1910 and in the 5 months up to June 1, 1911. It is impossible that these could have been all distributed to their real destination by the census date, June 1. The full analysis of this important point properly belongs to a chapter on immigration but the following table would seem to be necessary here.

STATEMENT K.-

Points of Distribution	Population		Increase	Immigrant population 1911	Expected net pop- ulation after deducting deaths 1921	Persons from other parts of Canada 1911	Immigrant population of 1921 arriving before 1911	Esti- mated number leaving points 1911-21
	1901	1911						
Calgary,	4,392	43,704	39,312	24,508	22,800	14,538	14,651	8,149
Edmonton,	4,176	31,064	26,888	12,425	17,200	8,996	12,352	4,848
Port William,	3,633	16,499	12,866	8,385	7,798	1,015	4,394	3,404
Hamilton,	52,634	81,969	29,335	29,925	27,800	1,122	20,943	6,857
Halifax,	40,832	46,619	5,787	6,954	6,450	1,642	4,624	1,826
London,	37,976	46,300	8,324	11,133	10,300	577	9,581	719
Montreal,	328,172	490,504	162,332	86,853	97,500	13,020	61,336	36,164
Dose Jaw,	1,558	13,823	12,265	7,065	6,570	5,500	3,762	2,808
Ottawa,	59,928	87,062	27,134	15,068	14,000	15,100	10,656	3,344
Quebec,	68,840	78,710	9,870	2,811	2,600	598	1,535	1,065
Regina,	2,249	30,213	27,964	15,277	14,200	11,061	6,894	7,306
Saskatoon,	113	12,004	11,891	5,728	5,300	5,329	5,163	137
Sault Ste. Marie,	7,169	14,920	7,751	3,717	7,100	587	2,991	4,109
Toronto,	209,892	381,833	171,941	144,172	139,000	7,779	101,701	37,299
Vancouver,	29,432	120,847	91,415	56,423	52,400	29,402	33,724	18,676
Victoria,	20,919	31,660	10,741	18,694	17,400	5,022	12,029	5,371
Winnipeg,	42,340	136,035	93,695	76,068	70,200	28,118	46,754	23,446
	914,255	1,663,766	749,511	525,206	518,618	149,406	353,090	165,528

The above table furnishes evidence that a large part of the increase in population between 1901 and 1911 was at the Census of 1911 still at points of distribution. In spite of the fact that a considerable number of the older immigrants who had already settled must have moved into these cities between 1911 and 1921 it is seen that 32 per cent, over and above deaths, were missing from these points in 1921, i.e. they had not stayed at these centres. Some of them, of course, left Canada. It was uncertain in 1911 whether they were going to settle or not; at any rate they were not going to stay at these points of distribution, and consequently they were not part of the population proper of these points. It will be seen that these 17 cities which have been taken as centres of distribution accounted for 40.8 p.c. of the total increase in Canada in 1901-11. The natural increase of these cities would probably account for 125,000 of this increase leaving about 624,000 increase due to the moving in of either immigrants or persons from other parts of Canada. Now in Canada, outside of these points, there were 1,061,755 immigrant population in 1911 of whom 987,432 might be expected to be alive in 1921.

The immigrant population of 1921 arriving before 1911 outside these points was 721,055, 266,377 less than expected, i.e. they lost 27 p.c. of the expected number of immigrants while the cities mentioned lost 32 p.c. of the expected. This is conclusive when it is remembered that these cities drew largely on the rest of Canada for their increase in population in the interval and furnishes evidence on a very important matter, viz., that a large element of the population of 1911 was located at points of distribution on the census date. Some of these afterwards were distributed throughout Canada; others left the country.

It is highly significant also that these points in 1911 contained 525,206 of the 1,586,961 immigrant population of Canada, or 33.1 per cent, and 149,406 or 26.6 per cent of the 562,341 Canadian born residing in Canada but outside their province of birth, while they contained only 23.1 per cent of the total population of Canada. i.e., they had in 1911, 1.4 times their share of the immigrant population and more than their share of the population born in provinces other than their province of residence. These two sets might be expected to contain an element in transit, i.e. residing at these points for the purpose of spying out the land for their future home. These percentages would be much more striking if all the points of distribution could have been selected instead of 17 as above, but the data could not be completed for such points as Port Arthur, Prince Albert, New Westminster, etc., i.e. for all frontier cities and towns. That the comparative percentages just mentioned would be much more striking if such frontier points had been included is seen from the figures of Calgary, Edmonton, Regina, Winnipeg, Fort William, etc., in Statement K. above.

A reasonable explanation, therefore, is possible for the position of the decade 1901-11 in the record of population growth. At the Census of 1911 there was a large element in Canada who had not yet become a fixed population, i.e. had not yet settled or given indication of settling. The result was that they made the rate of increase in 1901-11 larger, and in 1911 21 smaller, than what may be considered normal. However, it will be seen that the presence of a similar unabsorbed element has been characteristic of every Canadian census of the present century, only on a smaller scale than in 1911.

A statement is given, as previously, showing the counties increasing more than 14 p.c. and a summary of the other counties.

STATEMENT L.- COUNTIES SHOWING INCREASE OF 14 P.C. OR MORE, 1901-11.

Number on Map	County		P.C. Increase	Density 1901	Population		
			1901-11		1901	1911	Increase
3.	Cape Breton,	N.S.	49.2	51	49,166	73,330	24,164
4.	Gloucester,	N.B.	16.9	15	27,936	32,662	4,726
7.	Madawaska,	"	35.5	10	12,311	16,678	4,367
10.	Restigouche,	"	48.2	3	10,586	15,687	5,101
13.	Victoria,	"	30.8	4	8,825	11,544	2,719
5.	Beauce,	Que.	15.0	29	33,198	38,161	4,963
9.	Bonaventure,	"	14.8	7	24,495	28,110	3,615
11.	Chambly,	"	30.8	93	12,779	16,711	3,932
12.	Champlain,	"	37.0	4	32,015	43,866	11,851
15.	Chicoutimi,	"	38.5	1	16,872	23,375	6,503
18.	Dorchester,	"	18.2	25	20,697	24,457	3,760

STATEMENT L.- COUNTIES SHOWING INCREASE OF 14 P.C. OR MORE, 1901-11.-Concluded.

Number on Map	County		P.C.	Density 1901	Population		
			Increase 1901-11		1901	1911	Increase
20.	Frontenac,	Que.	28.3	13	17,358	22,272	4,914
21.	Gaspé,	"	14.1	7	30,683	35,001	4,318
28.	Labelle,	"	90.8	3	7,175	13,691	6,516
29.	Lac-St-Jean,	"	34.5	0.9	20,156	27,111	6,955
37.	Matane,	"	34.6	6	20,456	27,539	7,083
38.	Mégantic,	"	31.1	31	23,878	31,314	7,436
41.	Montmagny,	"	17.6	23	14,757	17,356	2,599
43.	Montreal Island,	"	53.7	179.5	360,838	554,761	193,923
52.	Richmond,	"	19.4	33	17,821	21,282	3,461
53.	Rimouski,	"	21.6	9	19,701	23,951	4,250
55.	Saguenay,	"	36.8	0.04	11,263	15,402	4,139
57.	Sherbrooke,	"	26.0	77	18,426	23,211	4,785
62.	St-Maurice,	"	19.6	16	29,311	35,045	5,734
63.	Témiscouata,	"	24.8	16	29,185	36,430	7,245
64.	Temiskaming,	"	93.8	0.5	4,280	8,293	4,013
2.	Algoma,	Ont.	62.1	1	25,273	40,962	15,689
3.	Brant,	"	20.3	91	38,140	45,876	7,736
5.	Carleton,	"	23.2	102	96,904	119,384	22,480
6.	Cochrane,	"	-	-	-	12,236	12,236
11.	Essex,	"	15.0	83	58,744	67,547	8,803
21.	Kenora,	"	49.4	0.6	10,369	15,490	5,121
27.	Lincoln,	"	16.0	92	30,552	35,429	4,877
31.	Nipissing,	"	62.2	2	17,306	28,066	10,760
42.	Rainy River,	"	58.8	0.9	6,568	10,429	3,861
47.	Sudbury,	"	84.9	0.9	16,103	29,778	13,675
48.	Thunder Bay,	"	252.1	0.2	11,219	39,496	28,277
49.	Timiskaming,	"	2024.0	0.2	1,252	26,592	25,340
51.	Waterloo,	"	19.0	102	52,594	62,607	10,013
52.	Welland,	"	33.5	82	31,588	42,163	10,575
54.	Wentworth,	"	40.6	173	79,452	111,706	32,254
55.	York,	"	62.9	309	272,663	444,234	171,571
56.	District of Patricia,"		-	-	-	4,017	4,017
Total			45.0		1,622,895	2,353,252	730,357
All Eastern Canada			15.8		4,725,798	5,471,023	745,225
Remainder of Eastern Canada			40.5		3,102,903	3,117,771	14,868
The West and North			168.9		645,517	1,735,620	1,090,103
All Canada			34.2		5,371,315	7,206,643	1,835,328

THE DECADE 1911-21.-

Growth.- The population in this decade increased from 7,206,643 to 8,787,949, by 1,581,306 or nearly 22 p.c. This compares with an increase of 1,835,328 or 34 p.c. in the previous decade. The smaller increase of 1911-21 by 254,022, is subject to certain qualifications. The immigrant population of 1911 who arrived in 1910 and the first five months of 1911, and therefore had a very precarious hold on the country was 301,648, while the similar population of 1921 was 145,294. This made up 156,354 of the difference in the amount of increase. The population of 1911 contained 1,029,516 immigrants who arrived between 1901 and 1911 and of these about 700,000 survived till 1921, a loss of more than 300,000 of whom not more than 100,000 could be attributed to deaths in Canada. The year 1921 had about 800,000 arrivals of the last ten years or about 200,000 less than 1911. This shows that recent arrivals have only a slight hold on the country and are not apt to be properly settled at the date of the census. If we discount these we have very little difference in the increases of the two decades. The increase of native population was 1,212,531 in 1911-21 as compared with 947,867 in 1901-11. The rates were 16.8 in 1911-21 and 17.6 in 1901-11 on the population as a whole. The native Canadians, however, increased 21.6 p.c. in 1911-21 as compared with 20.3 p.c. in 1901-11, some of this increase being due, of course, to births among the immigrant population.

Meanwhile the Canadian born population of the United States decreased instead of increasing as heretofore.

Direction of Movement and Stage of Settlement.- The centre of population moved 19 miles north and 71 miles west to Algoma county, and it is interesting to see how this happened.

The western provinces did not gain as much in 1911-21 as in the previous decade (757,189 in 1911-21 and 1,090,103 in 1901-11) so that the north westerly movement must have been due to differential gains in the north and west of the eastern provinces, or losses in the south and east, except that one reason was a slowing up in Manitoba as compared with the more westerly west. Three counties in northern New Brunswick, six in northern Quebec and five in north western Ontario showed a combined gain of 118,627. Of 57 counties which in this decade showed absolute decreases, 18 were in the Maritimes, 13 in southern Quebec and 26 in Ontario, mainly south and east. It is striking in the face of the greater rate of increase in 1901-11 that there were 60 counties in Eastern Canada which showed absolute decreases in that decade as compared with 57 in 1911-21; while 40 counties in the latter showed increases of more than 14 p.c. as compared with 43 in 1901-11. It is clear, then, that the growth in 1911-21 was far more evenly distributed than in the previous decade. Thus 96 p.c. of the increase in Eastern Canada in 1911-21 occurred in counties which had only 44 p.c. of the population, while in 1901-11, 98 p.c. took place in 34 p.c. of the population, while in 1921-31, 92 p.c. took place in 45 p.c. of the population. Thus 1901-11 showed the greatest and 1921-31 the least discrimination in the matter of movement of population.

Thus while 1911-21 gained a smaller increase than the previous decade, there were very few manifestations of a slowing up in growth, the differential rates were a matter of temporary circumstances. The decade 1911-21 was spent in distributing the inflow of the previous decade so that the increases in the two decades could not be dissociated. It is questionable whether the influences of the Great War could not be discounted in the growth of 1911-21.

As before a statement is given below showing the counties increasing more than 14 p.c. with a general summary for Canada.

STATEMENT M. COUNTIES SHOWING INCREASES OF 14 P.C. OR MORE, 1911-21.

Number on Map	County		P.C. Increase	Density 1911	Population		Increase
			1911-21		1911	1921	
3.	Cape Breton,	N.S.	15.9	75	73,330	86,296	12,966
8.	Halifax and Royal Canadian Navy,	"	21.1	39	80,257	97,713	17,456
4.	Gloucester,	N.B.	18.4	17	32,662	38,684	6,022
7.	Madawaska,	"	20.8	13	16,678	20,138	3,460
10.	Restigouche,	"	45.6	5	15,687	22,839	7,152
14.	Westmorland,	"	19.7	31	44,621	53,387	8,766
1.	Abitibi,	Que.	617.0	0.03	2,063	14,807	12,744
11.	Chambly,	"	31.2	121	16,711	21,924	5,213
12.	Champlain,	"	23.2	5	43,866	54,034	10,168
15.	Chicoutimi,	"	60.8	1	23,375	37,578	14,203
19.	Drummond,	"	16.5	32	17,149	19,975	2,826
21.	Gaspé,	"	15.4	8	35,001	40,375	5,374
28.	Labelle,	"	44.1	6	13,691	19,734	6,043
29.	Lac-St-Jean,	"	31.1	1	27,111	35,539	8,428
33.	Lévis,	"	15.3	106	28,913	33,323	4,410
37.	Matane,	"	31.8	8	27,539	36,303	8,764
41.	Montmagny,	"	26.7	28	17,356	21,997	4,641
43.	Montreal Island,	"	30.5	2,760	554,761	724,205	169,444
44.	Jesus Island,	"	22.8	123	11,407	14,005	2,598
50.	Quebec,	"	19.2	38	104,554	124,627	20,073
53.	Rimouski,	"	14.9	11	23,951	27,520	3,569
57.	Sherbrooke,	"	32.6	98	23,211	30,786	7,575
61.	St-Jean,	"	14.8	60	12,389	14,219	1,830
62.	St-Maurice,	"	45.1	19	35,045	50,845	15,800
63.	Témiscouata,	"	21.6	20	36,430	44,310	7,880
64.	Temiskaming,	"	41.9	0.9	8,293	11,764	3,471
65.	Terrebonne,	"	16.9	37	29,018	33,908	4,890
3.	Brant,	Ont.	16.4	109	45,876	53,377	7,501
5.	Carleton,	"	24.6	126	119,384	148,705	29,321
6.	Cochrane,	"	114.9	0.2	12,236	26,293	14,057
11.	Essex,	"	51.9	96	67,547	102,575	35,028
27.	Lincoln,	"	37.3	107	35,429	48,625	13,196
31.	Nipissing,	"	23.1	4	28,066	34,541	6,475
42.	Rainy River,	"	29.6	1	10,429	13,518	3,089
47.	Sudbury,	"	44.5	2	29,778	43,029	13,251
48.	Thunder Bay,	"	25.5	0.8	39,496	49,560	10,064
51.	Waterloo,	"	20.2	121	62,607	75,266	12,659
52.	Welland,	"	58.1	109	42,163	66,668	24,505
54.	Wentworth,	"	37.5	244	111,706	153,567	41,861
55.	York,	"	45.8	504	444,234	647,665	203,431
Total			32.8		2,404,020	3,194,224	790,204
All Eastern Canada			15.1		5,471,023	6,295,140	824,117
Remainder of Eastern Canada			1.1		3,067,003	3,100,916	33,913
The West and North			43.6		1,735,620	2,492,809	757,189
All Canada			21.9		7,206,643	8,787,949	1,581,306

THE DECADE 1921-31.

Growth.— In this decade the population of Canada increased from 8,787,949 to 10,376,786, i.e., by 1,588,837 or 18.1 p.c., the great part of it evidently taking place in the last half of the decade. Of this increase 943,449 took place in 39 counties of Eastern Canada which in 1921 had a population of 2,854,343; 76,452 in the remaining counties of Eastern Canada which in 1921 had a population of 3,440,797, and 568,936 in the West and North which in 1921 had a population of 2,492,809. The immigrant population increased 351,800; the native 1,237,037. The native population increased 14.1 p.c. on the population as a whole, while it increased 18.1 p.c. on the native population, so that the native and immigrant population increased at almost exactly the same rates. For the first time not only in the century but since 1871, the eastern growing counties showed greater rates of increase than the West. Furthermore, the West appropriated 60 p.c. of the total increase in Canada in 1901-11; 48 p.c. in 1911-21 and only 36 p.c. in 1921-31. It increased 22.8 p.c. in this decade as compared with 43.6 in 1911-21 and 168.9 in 1901-11. All Eastern Canada in 1921-31 increased 16.2 p.c. as compared with 15.1 in 1911-21 and 15.8 in 1901-11. The counties of Eastern Canada showing decreases in 1921-31 were 55 as compared with 57 in 1911-21 and 60 in 1901-11. Thus the gain in the East was not merely a matter of going into cities, but also of distribution among the various counties.

Direction of Movement and Stage of Settlement.— The centre of population of Canada moved 8 miles north and 30 miles west, but this was almost entirely due to the great growth of British Columbia as compared with the other western provinces and to a decrease in Nova Scotia.

As has already been seen the distribution of the increase was less discriminate, i.e. it was shared more evenly by the different counties of the East in 1921-31 than in any other decade of the century. There is evidence, however, that this was not a rural spread in the sense of farm population. The counties which showed large rural increases did not show corresponding increases in farm population as given by the Census of Agriculture. The spread when it was not into cities, towns and villages was either into small unincorporated villages or the return of persons to farms who did not give farming as their occupation. The permanency of such a population is uncertain.

As in the other cases a statement is given below showing the counties which increased more than 14 p.c. and a general summary for the remainder of Canada.

STATEMENT N. COUNTIES SHOWING INCREASES OF 14 P.C. OR MORE, 1921-31.

Number on Map	County		P.C. Increase		Population		
			1921	31	1921	1931	Increase
7.	Madawaska,	N.B.	21.8	16	20,138	24,527	4,389
10.	Restigouche,	"	30.7	7	22,839	29,859	7,020
13.	Victoria,	"	16.5	6	12,800	14,907	2,107
1.	Abitibi,	Que.	60.0	0.2	14,807	23,692	8,885
6.	Beauharnois,	"	26.5	135	19,888	25,163	5,275
11.	Chambly,	"	22.3	159	21,924	26,801	4,877
15.	Chicoutimi,	"	48.3	2	37,578	55,724	18,146
19.	Drummond,	"	31.1	38	19,975	26,179	6,204

STATEMENT No. - COUNTIES SHOWING INCREASES OF 14 P.C. OR MORE, 1921-31.-Concluded.

Number on Map	County		P.C.	Density 1921	Population		
			Increase 1921-31.		1921	1931	Increase
23.	Hull,	Que.	16.8	22	54,682	63,870	9,188
29.	Lac-St-Jean,	"	41.4	2	35,539	50,253	14,714
37.	Matane,	"	24.7	10	36,303	45,272	8,969
42.	Montmorency,	"	21.0	7	14,008	16,955	2,947
43.	Montreal Island,	"	38.6	3,603	724,205	1,003,868	279,663
44.	Jesus Island,	"	15.3	151	14,005	16,150	2,145
50.	Quebec,	"	37.1	45	124,627	170,915	46,288
53.	Rimouski,	"	20.5	13	27,520	33,151	5,631
55.	Saguenay,	"	29.4	0.05	16,818	21,754	4,936
57.	Sherbrooke,	"	21.4	129	30,786	37,386	6,600
61.	St-Jean,	"	24.1	69	14,219	17,649	3,430
62.	St-Maurice,	"	35.9	28	50,845	69,095	18,250
64.	Temiskaming,	"	75.2	1	11,764	20,609	8,845
5.	Carleton,	Ont.	14.4	157	148,705	170,040	21,335
6.	Cochrane,	"	120.7	0.5	26,293	58,033	31,740
11.	Essex,	"	55.8	145	102,575	159,780	57,205
21.	Kenora,	"	31.7	0.9	16,662	21,946	5,284
31.	Nipissing,	"	19.3	5	34,541	41,207	6,666
32.	Norfolk,	"	18.9	42	26,366	31,359	4,993
34.	Ontario,	"	28.3	55	46,494	59,667	13,173
37.	Peel,	"	17.8	51	23,896	28,156	4,260
42.	Rainy River,	"	28.4	2	13,518	17,359	3,841
46.	Stormont,	"	29.4	61	25,134	32,524	7,390
47.	Sudbury,	"	35.4	2	43,029	58,251	15,222
48.	Thunder Bay,	"	31.4	0.9	49,560	65,118	15,558
49.	Timiskaming,	"	39.0	5	26,657	37,043	10,386
51.	Waterloo,	"	19.4	149	75,266	89,852	14,586
52.	Welland,	"	24.1	172	66,668	82,731	16,063
54.	Wentworth,	"	23.7	335	153,567	190,019	36,452
55.	York,	"	32.3	734	647,665	856,955	209,290
56.	District of Patricia,	"	60.4	0.02	2,477	3,973	1,496
Total			33.1		2,854,343	3,797,792	943,449
All Eastern Canada			16.2		6,295,140	7,315,041	1,019,901
Remainder of Eastern Canada			2.2		3,440,797	3,517,249	76,452
The West and North			22.8		2,492,809	3,061,745	568,936
All Canada			18.1		8,787,949	10,376,786	1,588,837

GENERAL SUMMARY, 1851-1931.

The foregoing pages have attempted to place under review, decade by decade, a period of 80 years covering the latter half of one stage of growth and three decades of a new. There is no doubt that this distinction can be drawn legitimately between the period preceding and the period succeeding the middle part of the decade 1891-1901. The year 1851 found the population of Eastern Canada spread among 142 fairly well settled counties. The following decade saw a huge increase in population, due to the combined force of a large natural increase and heavy immigration. At the same time there were movements out of the most thickly settled parts of Quebec, not necessarily away from Canada but to the more thinly, though not very thinly settled parts. The next decade saw a much heavier outward movement, but evidently only the immigrant population moved in large numbers out of the country, the native population going to more thinly settled parts of Canada. Again the outward movement was largely from the thickly settled parts of Quebec. The next decade saw a continuation of this outward movement, this time extending to Ontario; but again the exodus of the native population was largely to other parts of Canada, only the immigrant population moving out. Up to this time there was only a slight overflow to the West, the moving native population going to other parts of the East, i.e. to 10 counties which had no recorded inhabitants in 1851 and to other less densely settled parts. It must be borne in mind that the movement was from the more densely to the more thinly settled parts, also that it began slowly and gradually increased up to 1881 and thus was quite systematic. Meanwhile large numbers of immigrant arrivals were recorded each year. In the next decade (1881-91) the exodus increased and accelerated, this time sweeping the native as well as the immigrant population out of the country. For the first time the exodus spread to the Maritimes. It should be noticed, however, that at least half the exodus of natives from the settled parts was into other parts of Canada. The West grew by 181,481 and two new counties of the East recorded population for the first time (in 1891). The result was that the population of Canada as a whole showed a very rapid drop in its rate of increase. The first part of the next decade saw a continuation of the accelerating exodus so that by 1896 the rate of increase in Canada must have been very close to the vanishing point. This completes the old stage of development.

The second half of the decade 1891-1901 saw a turn of the tide. Although the exodus from the thickly settled parts continued, the first ones to decline (in Quebec) showed symptoms of recovery. The exodus was once more to other parts of Canada. The West gained 295,871 in the whole decade. Two counties in the East recorded population for the first time. The next decade 1901-11, saw the second largest rate of increase in the 80 years under review, but this increase was in many respects abnormal. The eastern counties emptied practically as fast as in the two former decades, and the increase was concentrated in a few areas, particularly the cities of the East and in the West. It is clear that a large part of the increase was still at points of distribution at the Census of 1911. The next two decades increased at what might be considered very normal rates and it is clear that the increase of each successive decade of the century was associated with the increase of the previous decade. The concentration of the increase became continuously less, so that 1921-31 saw more even spread of the increase throughout the counties of Canada than any decade of the century. The trend of growth came back from the West to the East, not entirely to cities. It will be shown elsewhere that some of this was due to the movement east of persons born in the West.

A striking fact that should be mentioned in connection with the exodus described above, and which continued up to the last census, is that up to 1881

the exodus was from the more thickly settled parts. Since the beginning of the century, however, this trend has changed, so that in 1921 31 the average density of decreasing counties was only about one-half of what it was in 1871-81. This is illustrated in two statements given below.

STATEMENT O. COUNTIES OF EASTERN CANADA SHOWING DECREASE IN DECADE.

Class	Density	1851	1861	1871	1881	1891	1901	1911	1921
		1861	1871	1881	1891	1901	1911	1921	1931
1.	under 20		5	3	15	16	20	20	19
2.	20 and under 30		3	1	8	7	8	6	13
3.	30 " " 40		1	-	6	7	5	8	7
4.	40 " " 50		3	1	2	13	11	12	6
5.	50 " " 60		4	1	13	12	11	7	7
6.	60 " " 70	2	6	5	7	11	3	2	2
7.	70 " " 80	1	5	3	5	-	1	-	1
8.	80 " " 90		3	-	2	-	-	-	-
9.	90 " " 100	1	2	-	1	1		1	-
10.	100 " " 110		1	1	2	-	-	-	-
11.	110 " " 120		1	-	-	-	-	-	-
12.	120 and over		-	-	-	-	1	1	-
Total		4	34	15	61	67	60	57	55
Mean Class		7.0	5.3	5.0	4.0	3.4	3.1	3.0	2.6

STATEMENT P. PER CENT IN EACH DENSITY CLASS OF THE COUNTIES OF EASTERN CANADA DECREASING IN DECADE.

Density class	1851	1861	1871	1881	1891	1901	1911	1921
	1861	1871	1881	1891	1901	1911	1921	1931
1.	0	13.0	5.2	26.3	27.1	33.3	34.5	34.5
2.	0	13.0	3.3	34.8	33.3	36.4	28.6	52.0
3.	0	12.5	0	54.5	63.6	41.7	44.4	43.8
4.	0	25.0	10.0	23.1	76.5	55.0	60.0	31.6
5.	0	50.0	6.7	72.2	85.7	61.1	58.3	50.0
6.	33.3	75.0	55.6	63.6	78.6	60.0	20.0	25.0
7.	20.0	71.4	42.9	71.4	0	25.0	0	50.0
8.	0	50.0	0	50.0	0	0	0	0
9.	25.0	100.0	0	50.0	25.0	0	50.0	0
10.	0	100.0	50.0	66.7	0	0	0	0
11.	0	33.3	0	0	0	0	0	0
12.	0	0	0	0	0	25.0	12.5	0
All Classes	2.8	22.5	9.9	40.1	43.5	38.5	36.1	34.8

The second table is given to remove doubt on the point that the changes in category of the decreasing counties were not due to the progressive thinning out of these counties by previous decreases. As a matter of fact it has already

been shown that several of the counties previously showing decreases were showing increases in 1921-31, and could not have been represented in the above table. the process is a real one, viz. a growing tendency during the present century to move away from the more thinly settled parts in contradistinction to the tendency up to 1881 of confining the exodus to the more thickly settled parts. The foregoing tables show only the eastern counties, but it is also true that a large number of the western counties which are new and necessarily thinly settled, also showed decreases in the last decade. Thus 13 census divisions of the Prairie Provinces decreased between 1921 and 1926. Furthermore, it is significant that the very thickly settled parts, i.e. the parts with large cities show, a growing tendency to absorb the increases. It has also been pointed out that especially in 1921-31 the increases seemed to be confined to urban aggregates whether or not incorporated. This would seem to indicate a growing tendency away from rural to urban settlements and that Canada's growth in the last two decades, especially in the last half of the last decade, has been largely due to urbanization, and not urbanization in the sense of large cities only. Where "rural" counties increase it is not through an increase in population on the farm.

To sum up the processes of growth in the 80-year period under review, the following points would seem to have been removed from the realm of speculation.

1. The growth of Canada in no decade is an isolated phenomenon, but is associated with the growth in previous decades. A sudden slowing up or a speeding up in any decade is associated with the reverse process in some previous decade.

2. Although the growth of Canada as a whole is the summation of the growth of its parts (counties), the observed behaviour of the whole and the parts are quite different. Thus we have no record of a decrease in the population of Canada as a whole, although something near it must have happened sometime between 1891 and 1901. The reason for this is that the process works much more rapidly in the parts, and of course the process could be traced much more accurately if population was under yearly instead of decennial observation. In its shorter life the individual county passes through all the phases which take considerably longer for the whole Dominion. We observe in the behaviour of counties, first a rapid increase, then a slowing up, later a decrease, and finally a recovery. In Canada as a whole we observe a rapid increase, then a much more gradual slowing up which does not reach the point of decrease and then a recovery. We observe, however, that what appears at first sight to be an unprecedented increase such as that of the present century, is really of smaller proportions than previous increases. Thus the increase from 1901-31 is on a lower level than the increase up to 1861. There is shown a slowing up when the observation is over a long period.

3. The net result of the process of growth in counties is that 87 out of the 219 counties have passed a point of a least temporary maximum population, i.e. they had a greater population at some previous census than in 1931. Of these, two (Laprairie and Deux Montagnes) reached their maximum population in or before 1851; 12 in 1861; 25 in 1881; 16 in 1891; 7 in 1901; 8 in 1911; 16 between 1911 and 1921 and 1 at least in 1926. It is remarkable that 16 of these reached their maximum population in 1891, or the end of the decade showing the lowest absolute increase in Canada since 1851, and only 8 in 1911.

Many of the remaining counties showed decreases in decades, but recovered sufficiently to avoid passing a maximum before 1931; of those which have passed the point of maximum population many are showing increasing population at the present time, but their main tendency seems to be to recover up to a certain point

and then once more decrease without having regained their maximum population.

It is also observed that among counties thus reaching a maximum in population, those reaching a maximum in early years tend to be more thickly settled than those reaching a maximum in later years. Thus the Prairie Provinces have now representatives among the counties which had a smaller population in 1931 than at some previous census. This is in line with what has already been pointed out. The newer counties and others more distantly located from the original settlements seem, temporarily at least, to be incapable of reaching the same density of population as the old. This is further emphasized by the fact that in 1921-31 the growth switched back from the West to the East, i.e., in line with the urban movement.

It must be borne in mind that all counties whether they are increasing or decreasing, are meanwhile having an excess of births over deaths and are expected to increase. Consequently a decreasing, or stationary population or even a population increasing less than a certain percentage is losing ground, and this means an outward flow. The gross outward flow is greater than such estimates of it as can be arrived at from available data since the movement shown between decades is only a net movement, i.e. does not account for all the movement. At that, it will be interesting to examine the following table which shows in summary what has already been pointed out in describing different decades. Thus from 1851 to 1931 we have a record of counties which showed decrease and also those showing less than 14 p.c. increase, so that they must certainly have lost some natural increase. Aggregating for the eight decades we have 93.5 p.c. of the increases between decades taking place in counties of Eastern Canada which had only 39.2 p.c. of the population (those increasing more than 14 p.c.) at the beginning of the decade. The remainder showed an average of only 1.5 p.c. increase per decade.

Estimating at the rates of natural increase in Statement R. and the number of Canadians in the United States in Statement Q. it is calculated that (after allowing for deaths of Canadians in United States and immigrant population in Canada) in the 80 years from 1851 to 1931 at least 2,500,000 Canadian born moved into growing parts of Canada from parts that were either decreasing or losing some natural increase. At the same time 1,740,000 Canadian born left Canada for the United States, or if we allow for the Canadians who returned (i.e. those who went from one part of Canada to another via residence in the United States) about 2,250,000. It is quite safe to say, then, that more of the migrating Canadians went to other parts of Canada than to the United States. in spite of (in many cases) the greater accessibility and superior inducements of the latter. It is interesting further to note the increase in population in the 80 years due to immigration was 1,844,000 and that this about balances the loss of Canadians to the United States and certainly only balances the loss of Canadians to the United States and elsewhere.

Another highly important point derived from the foregoing is that Canada's increase in the 80 years is traceable to three processes, viz (1) natural increase remaining in counties where born; (2) natural increase spreading from counties where born to other counties of Canada and (3) immigration; and that the increase due to spread from where born to other counties was greater than from immigration.

However, it was during the earlier part of the period that her own population reached out to other counties, while during the later part of the period these outside parts have been growing largely by immigration. The change took place after 1881 before which the immigrant population was making very little headway in spite of a large number of arrivals annually. The heavy exodus of native population during the next fifteen years was no doubt largely due to the inaccessibility of newer areas. This is shown by the fact that the West grew by 587,302 from 1861 to 1901 largely from native Canadians. The immigrant population of all Canada grew only 16,851 in that period, while it grew by 887,461 in the next decade.

Now an external growth as above described, i.e. a growth by spreading from counties where born to other counties is quite a different thing from internal growth (i.e. indigenous growth). It can go on only so long as new parts are opening up and its extent depends upon whether the new parts have the same population capacity as the old. Clearly under past conditions they have not, as is shown by the fact that the newer parts are saturating sooner than the older parts. This is partly due to an increasing tendency to urbanization and consequently a matter of present day psychology rather than of inferiority of the new parts. This psychology would probably not retard growth in the country as a whole if the towns were situated in all parts, but as a matter of fact they tend to be concentrated in the older sections. It would seem, therefore, that the capacity of the whole country for growth depends upon the capacity of these towns. It would seem also that the capacity of the newer parts for urbanization will largely determine their further growth.

CERTAIN CONCLUSIONS.

While in a study like the foregoing, (of the growth of county populations, the direction of movement and the incidence of immigration) the chief value lies in the detailed presentation of the facts of development rather than in a few striking deductions, the following four general conclusions are indicated and may be of interest.

1. After what has been termed the first main period -- say since early in the 19th century -- the population of Canada kept growing principally by overflowing into new areas.
2. When moving, Canadians stayed in Canada preferably to leaving the country. But there were periods during which this choice could not be exercised owing to inaccessibility of the outer areas of Canada, or the greater accessibility of areas in the United States. The point of importance is that movement was unavoidable, the direction being governed by circumstances.
3. Immigration made no headway during periods of large outward movement in Canada. Immigrants arrived in large numbers but did not stay. In other words when parts of Canada were inaccessible to Canadians they were still more inaccessible to immigrants.
4. When immigration did make headway it was when new areas (including cities) were available. Coincident with this, Canadians not only in Canada but also from the United States, were competing for these new areas. The result of this competition was over-crowding. By spreading the huge increases of a period like 1901-1911 over, say, 30 years instead of 10, the same growth could have been achieved without over-crowding and confusion.

STATEMENT Q.- CANADIAN BORN IN CANADA AND THE UNITED STATES, 1851-1931.

Year	Total Canadian born	Increase from beginning of decade	Canadian born population in U.S.A.	Increase from beginning of decade	Canadian born population in Canada and U.S.A.	Increase from beginning of decade
1851.... 1/	1,976,297	570,687	147,711	102,259	2,124,008	672,946
1861.... 1/	2,546,984	550,698	249,970	243,494	2,796,954	794,192
1871.....	3,097,682	624,144	493,464	223,693	3,591,146	847,837
1881.....	3,721,826	467,542	717,157	263,781	4,438,983	731,323
1891.....	4,189,368	482,447	980,938	198,984	5,170,306	681,431
1901.....	4,671,815	947,867	1,179,922	24,715	5,851,737	972,582
1911.....	5,619,682	1,212,531	1,204,637	79,712	6,824,319	1,132,819
1921.....	6,832,213	1,237,048	1,124,925	153,496	7,957,138	1,390,544
1931.....	8,069,261	-	1,278,421	-	9,347,682	-

STATEMENT R.- MEAN POPULATION AND INCREASE IN CANADIAN BORN IN CANADA AND UNITED STATES, 1851-1931.

(Total Population of Canada, Canadian and Immigrant.
Geometric means for decade).

Decade	Mean population of Canada	Increase in Canadian born in Canada and U.S.A.	Canadian born increase as p.c. of mean population	Allowance for deaths of immigrants ^{2/}	Estimated natural increase
1851-61.....	2,805,000	672,946	24.0	-2.0	22.0
1861-71.....	3,415,800	794,192	23.3	-1.9	21.0
1871-81.....	3,994,300	847,837	21.2	-1.5	20.0
1881-91.....	4,572,000	731,323	16.0	-1.4	15.0
1891-1901....	5,095,000	681,431	13.4	-1.3	12.0
1901-11.....	6,221,600	972,582	15.6	-1.7	14.0
1911-21.....	7,958,400	1,132,819	14.2	-2.2	12.0
1921-31.....	9,549,500	1,390,544	14.6	-2.2	12.0

NOTE: The rates from the beginning of the century in the last column are believed to be too low on the ground that Canadian born probably emigrated in considerable numbers to other countries as well as to the United States. It is doubtful that they did so in appreciable numbers before the beginning of the century. In any case the rates throughout are low rather than high. The yearly natural increase around 1921 was probably as high as 16 per thousand. It is improbable that the ten year

1/ There are probably 100,000 persons, largely Indians in Manitoba and the Northwest Territories, who are not represented in this figure.

2/ The estimated deaths of immigrants were as follows: (See Statement S).

rate came under 15 per cent at any time in the century. If this is so, the emigration of Canadian born to countries other than the United States must have been quite large in the decade. The high death rate due to the War and influenza was not sufficient to explain the low rate of 1911-21. The emigration to other countries than the United States would be largely explained on the ground that children born in Canada of immigrants accompanied their parents when the latter left Canada.

STATEMENT S.-- ESTIMATED IMMIGRANT DEATHS IN CANADA, 1851-1931.

1851 - 1861	56,037
1861 - 1871	63,549
1871 - 1881	59,725
1881 - 1891	62,309
1891 - 1901	67,111
1901 - 1911	105,360
1911 - 1921	176,170
1921 - 1931	212,430
TOTAL	802,691

APPENDIX

STATEMENT T.- SUMMARY OF INFORMATION FOR THE COUNTIES, 1851-1931

	1851-61	1861-71	1871-81
Counties in Eastern Canada increasing over 20 p.c. of			
Population at beginning of decade	1,532,764	893,249	1,044,619
Increase in decade	697,130	304,697	358,050
Counties in Eastern Canada increasing 18-20 p.c. of			
Population at beginning of decade	178,220	58,923	136,193
Increase in decade	33,924	11,405	26,065
Counties of Eastern Canada increasing 14-18 p.c. of			
Population at beginning of decade	220,058	264,071	565,823
Increase in decade	35,691	42,662	89,558
All counties in Eastern Canada increasing more than 14 p.c. of			
Population at beginning of decade	1,931,042	1,216,243	1,746,635
Increase in decade	766,745	358,764	473,673
Counties of Eastern Canada increasing less than 14 p.c. of			
Population at beginning of decade	376,767	1,326,632	1,594,864
Increase in decade	30,495	92,627	112,685
Counties of Eastern Canada decreasing			
Population at beginning of decade	67,788	628,543	238,283
Increase in decade	-1,419	-43,027	-9,495
All Eastern Canada			
Population at beginning of decade	2,375,597	3,171,418	3,579,782
Increase in decade	795,821	408,364	576,863
The West and North			
Population at beginning of decade	60,700 ^{3/}	58,215 ^{3/}	109,475
Increase in decade	-2,485	51,260	58,690
All Canada			
Population at beginning of decade	2,436,297 ^{3/}	3,229,633 ^{3/}	3,689,257
Increase in decade	793,336	459,624	635,553
Immigrant Population at beginning of decade	460,000 ^{1/}	682,649	591,575
Increase in decade	220,000 ^{1/}	-91,074	11,409
Arrivals in decade (intending settlers)	203,743	178,814	341,955
Native Population at beginning of decade	1,976,297 ^{1/}	2,546,984	3,097,682
Increase in decade	570,687 ^{1/}	550,698	624,144
P.C. native increase on total population at beginning of decade	23.4	17.1	16.9
P.C. increase of mean population ^{2/}	20.1	15.9	15.6

1/ Estimated. The increase in Upper and Lower Canada was 192,278.

2/ i.e., to allow for the fact that incoming immigrants were partly responsible for the native increase in the decade.

3/ It will be noticed that Manitoba, British Columbia and the Northwest Territories are only partially covered in 1851 and 1861. It is probable that these areas contained 100,000 persons, including Indians, in these two decades, who are not represented in these figures.

STATEMENT T.- SUMMARY OF INFORMATION FOR THE COUNTIES, 1851-1931. (Concluded)

1881-91	1891-1901	1901-11	1911-21	1921-31
659,081	542,971	1,282,107	1,956,556	2,467,082
284,436	204,052	669,471	711,977	878,169
89,702	14,244	120,423	181,837	133,173
16,307	2,628	22,968	34,861	26,245
182,679	153,630	220,365	265,627	254,088
29,121	24,877	33,901	43,366	39,035
931,462	710,845	1,022,895	2,404,020	2,854,343
329,864	231,557	726,340	790,204	943,449
1,557,229	1,908,075	1,499,188	1,648,990	2,183,294
87,750	114,443	103,973	99,696	133,858
1,667,954	1,864,673	1,603,715	1,418,013	1,257,503
-90,666	-106,200	-89,105	-65,783	-57,406
4,156,645	4,483,593	4,725,798	5,471,023	6,295,140
326,943	242,205	745,225	824,117	1,019,901
168,165	349,646	645,517	1,735,620	2,492,809
181,481	295,871	1,090,103	757,189	568,936
4,324,810	4,833,239	5,371,315	7,206,643	8,787,949
508,429	538,076	1,835,328	1,581,306	1,588,837
602,984	643,871	699,500	1,586,961	1,955,725
40,887	55,629	887,461	368,775	351,800
886,177	321,302	1,847,651	1,728,921	1,509,136
3,721,826	4,189,368	4,671,815	5,619,682	6,832,224
467,542	482,447	947,867	1,212,531	1,237,037
10.8	10.0	17.6	16.8	14.1
10.2	9.5	15.1	15.2	12.9

